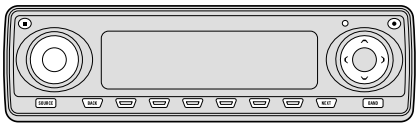
Pioneer *sound.vision.soul*

Service Manual

DEH-P90HDD/UC



ORDER NO.
CRT2761

HIGH POWER HDD/CD PLAYER WITH "MEMORY STICK" AND FM/AM TUNER

DEH-P90HDD UC
DEH-P900HDD EW,ES

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-961	CRT2503	H2	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

MC-Service

CONTENTS

1. SAFETY INFORMATION 2
2. EXPLODED VIEWS AND PARTS LIST 4
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM ...18
4. PCB CONNECTION DIAGRAM 54
5. ELECTRICAL PARTS LIST 66
6. ADJUSTMENT.....90
7. GENERAL INFORMATION 109
   7.1 DIAGNOSIS 109
      7.1.1 DISASSEMBLY 109
      7.1.2 CONNECTOR FUNCTION DESCRIPTION 115
   7.2 IC 116
   7.3 OPERATIONAL FLOW CHART 141
   7.4 CLEANING 142
8. OPERATIONS AND SPECIFICATIONS.....143

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

© **PIONEER CORPORATION 2001**

K-ZZA. DEC. 2001 Printed in Japan

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

● Service Precautions

1. For pickup unit(CXX1305) handling, please refer to"Disassembly"(see page 109).
   During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
3. Please checking the grating after changing the service pickup unit(see page 93).
4. You can't recover the data if the HDD should break for some reason.
5. Be careful to handle HDDs (as HDD navigation systems).
6. An external power supply box is used along with the unit. Customers may consult their dealers without bringing the box.
7. You can't play your data with any HDD or product other than the original one, because each product has its ID (CXK2000EN) for protecting copyrights. Please use both of the ID and the data in the HDD as paired with each other. (For example, if you exchange the digital units because your unit has defects, remove IC3305: CXK2000EN from the defective unit and install it in the new unit for use.)

1. SAFETY INFORMATION

UC

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

EW

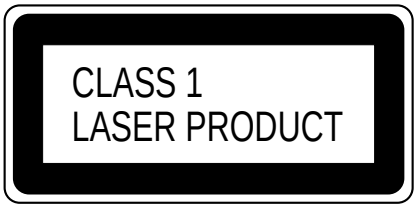
1. Safety Precautions for those who Service this Unit.

- **When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

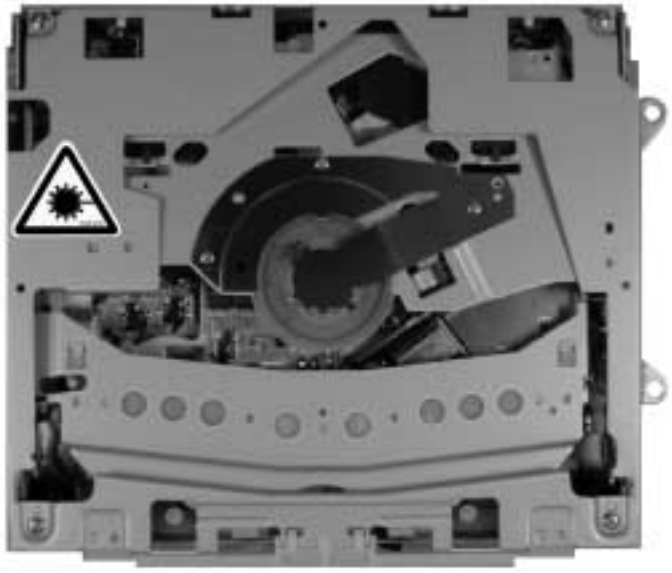
Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.



3. The triangular label is attached to the mechanism unit frame.



4. Specifications of Laser Diode

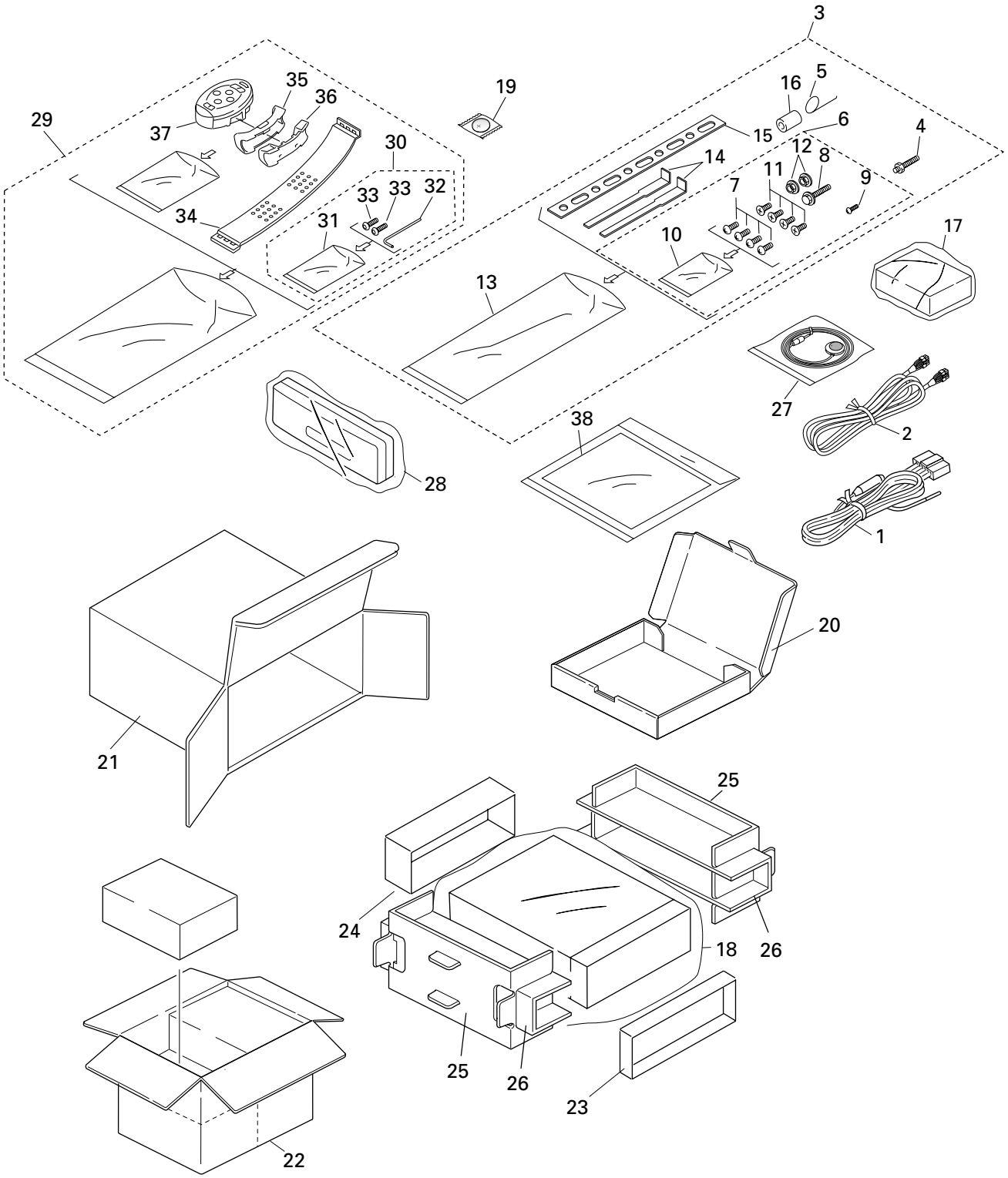
Specifications of laser radiation fields to which human access is possible during service.
Wavelength = 800 nanometers

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replaced only with the same or equivalent type recommended by the manufacture.
Discord used batteries according to the manufacture's instructions.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(DEH-P90HDD/UC)



NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

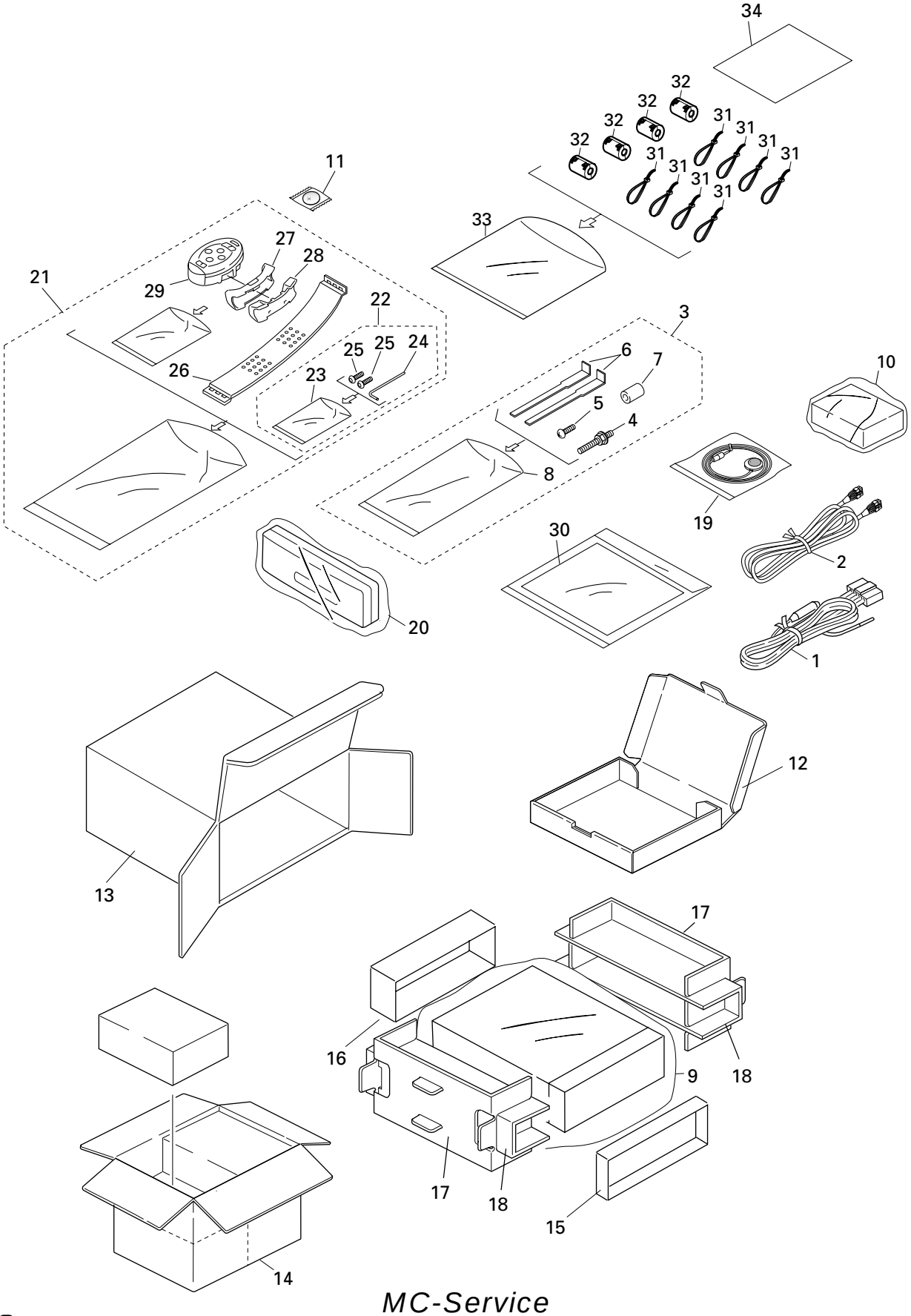
● PACKING(DEH-P90HDD/UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord Assy	CDE6563
	2	Cord Assy	CDE6584
	3	Accessory Assy	CEA3014
	4	Screw	CBA1002
	5	Spring	CBH-865
	6	Screw Assy	CEA3012
	7	Screw	BMZ50P080FMC
	8	Screw	CBA-102
	9	Screw(M2x6)	CBA1120
*	10	Polyethylene Bag	CEG-127
	11	Screw	CMZ50P080FMC
	12	Nut	NF50FMC
*	13	Polyethylene Bag	CEG-158
	14	Handle	CNC5395
	15	Strap	CNC5402
	16	Bush	CNV3930
*	17	Polyethylene Bag	CEG1163
	18	Polyethylene Bag	CEG1185
*	19	Battery	CEX1030
	20	Sub Carton	CHA3213
	21	Carton	CHG4504
	22	Contain Box	CHL4504
	23	Protector	CHP2385
	24	Protector	CHP2386
	25	Protector	CHP2445
	26	Protector	CHP2446
	27	Microphone Assy	CPM1054
	28	Case Assy	CXB3520
	29	Remote Control Assy	CXB6860
	30	Screw Assy	CZE3169
*	31	Polyethylene Bag	CEG-127
*	32	Hexagon Wrench	CZE3176
*	33	Screw	RMZ30H060FBK
	34	Belt	CZN7661
	35	Holder Assy	CZX3172
	36	Holder Assy	CZX3173
	37	Remote Control Assy	CZX3246
	38-1	Polyethylene Bag	CEG1116
	38-2	Owner's Manual	CRD3472
	38-3	Installation Manual	CRD3473
*	38-4	Caution Card	CRP1244
*	38-5	Card	ARY1048
*	38-6	Caution Card	CRP1274

● Owner's Manual, Installation Manual

Model	Part No.	Language
DEH-P90HDD/UC	CRD3472	English, French
DEH-P90HDD/UC	CRD3473	English, French

2.2 PACKING(DEH-P900HDD/EW)



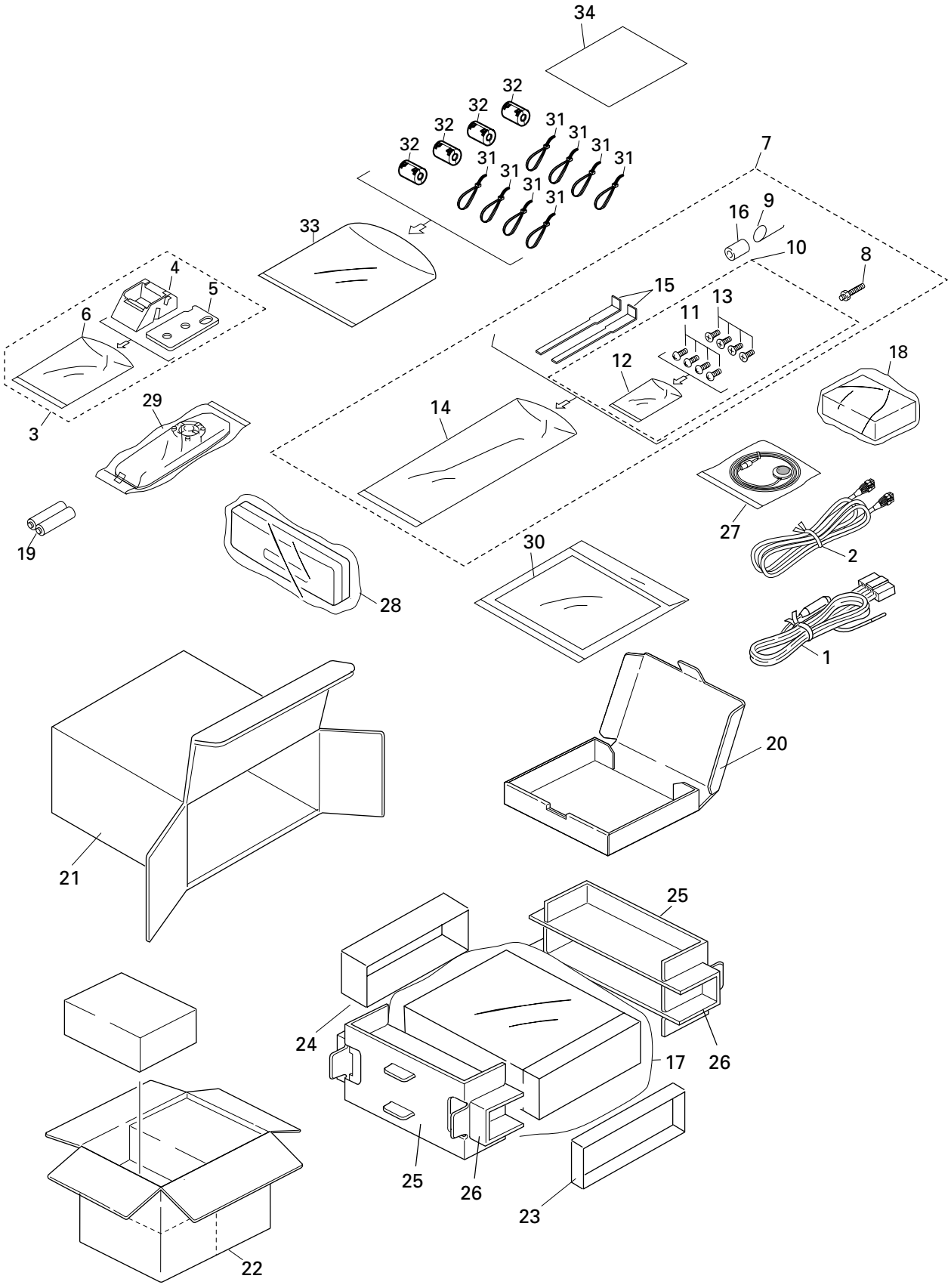
● PACKING(DEH-P900HDD/EW) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord Assy	CDE6562
	2	Cord Assy	CDE6584
	3	Accessory Assy	CEA3015
	4	Screw	CBA1002
	5	Screw(M2x6)	CBA1120
	6	Handle	CNC5395
	7	Bush	CNV3930
*	8	Polyethylene Bag	E36-615
*	9	Cover	CEG1088
*	10	Polyethylene Bag	CEG1163
*	11	Battery	CEX1030
	12	Sub Carton	CHA3213
	13	Carton	CHG4503
	14	Contain Box	CHL4503
	15	Protector	CHP2385
	16	Protector	CHP2386
	17	Protector	CHP2445
	18	Protector	CHP2446
	19	Microphone Assy	CPM1054
	20	Case Assy	CXB3520
	21	Remote Control Assy	CXB6860
	22	Screw Assy	CZE3169
*	23	Polyethylene Bag	CEG-127
*	24	Hexagon Wrench	CZE3176
*	25	Screw	RMZ30H060FBK
	26	Belt	CZN7661
	27	Holder Assy	CZX3172
	28	Holder Assy	CZX3173
	29	Remote Control Assy	CZX3246
	30-1	Polyethylene Bag	CEG1116
	30-2	Owner's Manual	CRD3468
	30-3	Owner's Manual	CRD3469
	30-4	Owner's Manual	CRD3470
	30-5	Installation Manual	CRD3471
*	30-6	Caution Card	CRP1244
	30-7	Passport	CRY1013
*	30-8	Warranty Card	CRY1157
*	30-9	Caution Card	CRP1275
*	31	Lock Tie	CNV-754
	32	Filter	CTX1060
	33	Polyethylene Bag	CEG1161
*	34	Caution Card	CRP1271

● Owner's Manual, Installation Manual

Part No.	Language
CRD3468	English, Spanish
CRD3469	German, French
CRD3470	Italian, Dutch
CRD3471	English, Spanish, German, French, Italian, Dutch

2.3 PACKING(DEH-P900HDD/ES)



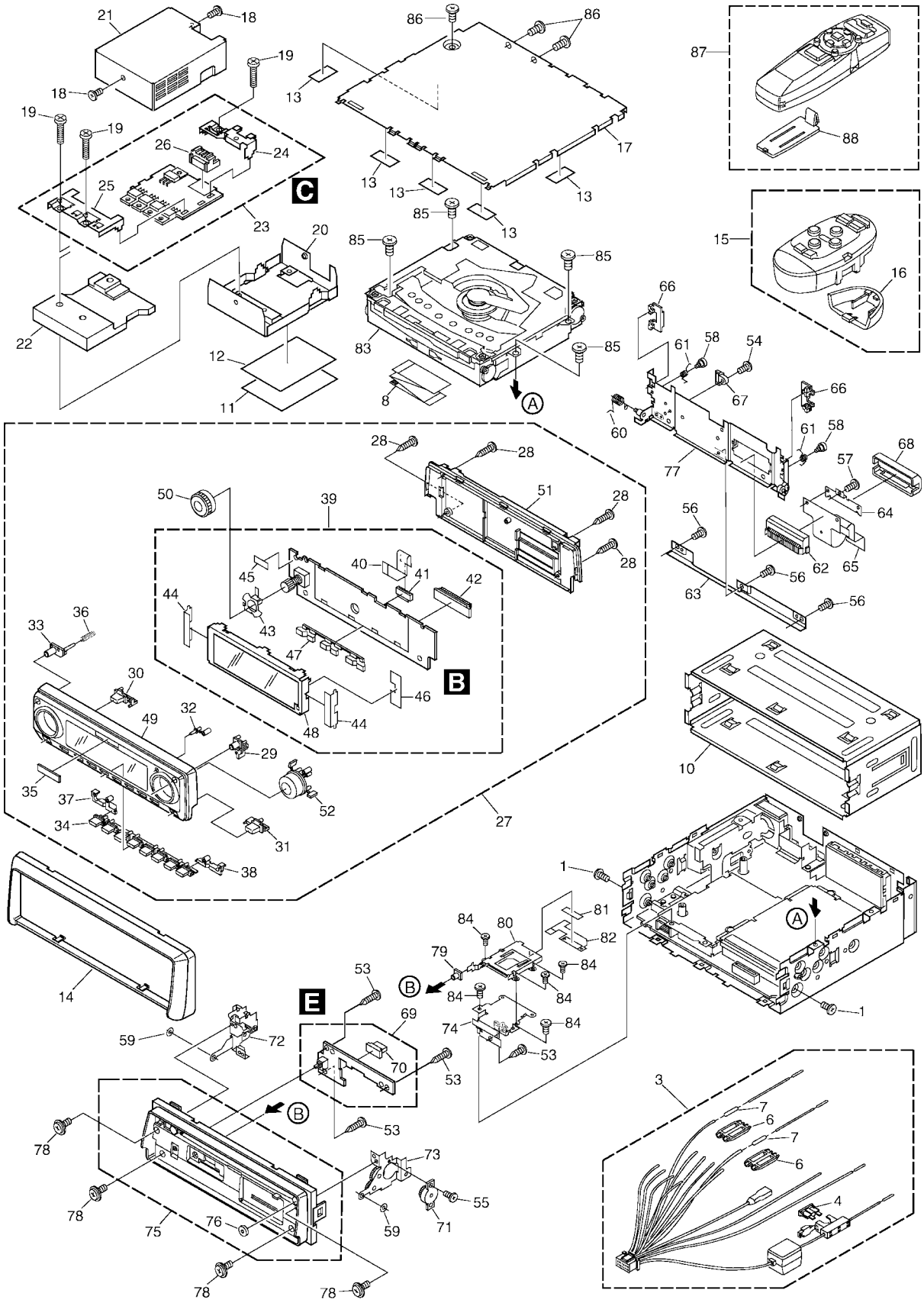
● PACKING(DEH-P900HDD/ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord Assy	CDE6563
	2	Cord Assy	CDE6584
	3	Base Assy	CEA2426
*	4	Base	CNS5031
*	5	Sheet	CZA3371
	6	Polyethylene Bag	CZE3188
	7	Accessory Assy	CEA3013
	8	Screw	CBA1002
	9	Spring	CBH-865
	10	Screw Assy	CEA3105
	11	Screw	BMZ50P080FMC
*	12	Polyethylene Bag	CEG-127
	13	Screw	CMZ50P080FMC
*	14	Polyethylene Bag	CEG-158
	15	Handle	CNC5395
	16	Bush	CNV3930
*	17	Cover	CEG1088
*	18	Polyethylene Bag	CEG1163
*	19	Battery	CEX1006
	20	Sub Carton	CHA3213
	21	Carton	CHG4505
	22	Contain Box	CHL4505
	23	Protector	CHP2385
	24	Protector	CHP2386
	25	Protector	CHP2445
	26	Protector	CHP2446
	27	Microphone Assy	CPM1054
	28	Case Assy	CXB3520
	29	Remote Control Assy	CXB3875
	30-1	Polyethylene Bag	CEG1116
	30-2	Owner's Manual	CRB1731
	30-3	Owner's Manual	CRD3474
	30-4	Owner's Manual	CRD3475
	30-5	Installation Manual	CRD3476
*	30-6	Caution Card	CRP1244
*	30-7	Caution Card	CRP1274
*	31	Lock Tie	CNV-754
	32	Filter	CTX1060
	33	Polyethylene Bag	CEG1161
*	34	Caution Card	CRP1271

● Owner's Manual, Installation Manual

Part No.	Language
CRB1731	English
CRD3474	English, Spanish
CRD3475	Portuguese(B), Arabic
CRD3476	English, Spanish, Portuguese(B), Arabic

2.4 EXTERIOR(1)(DEH-P90HDD/UC, DEH-P900HDD/ES)



(1) EXTERIOR(1)(DEH-P90HDD/UC, DEH-P900HDD/ES) SECTION PARTS LIST

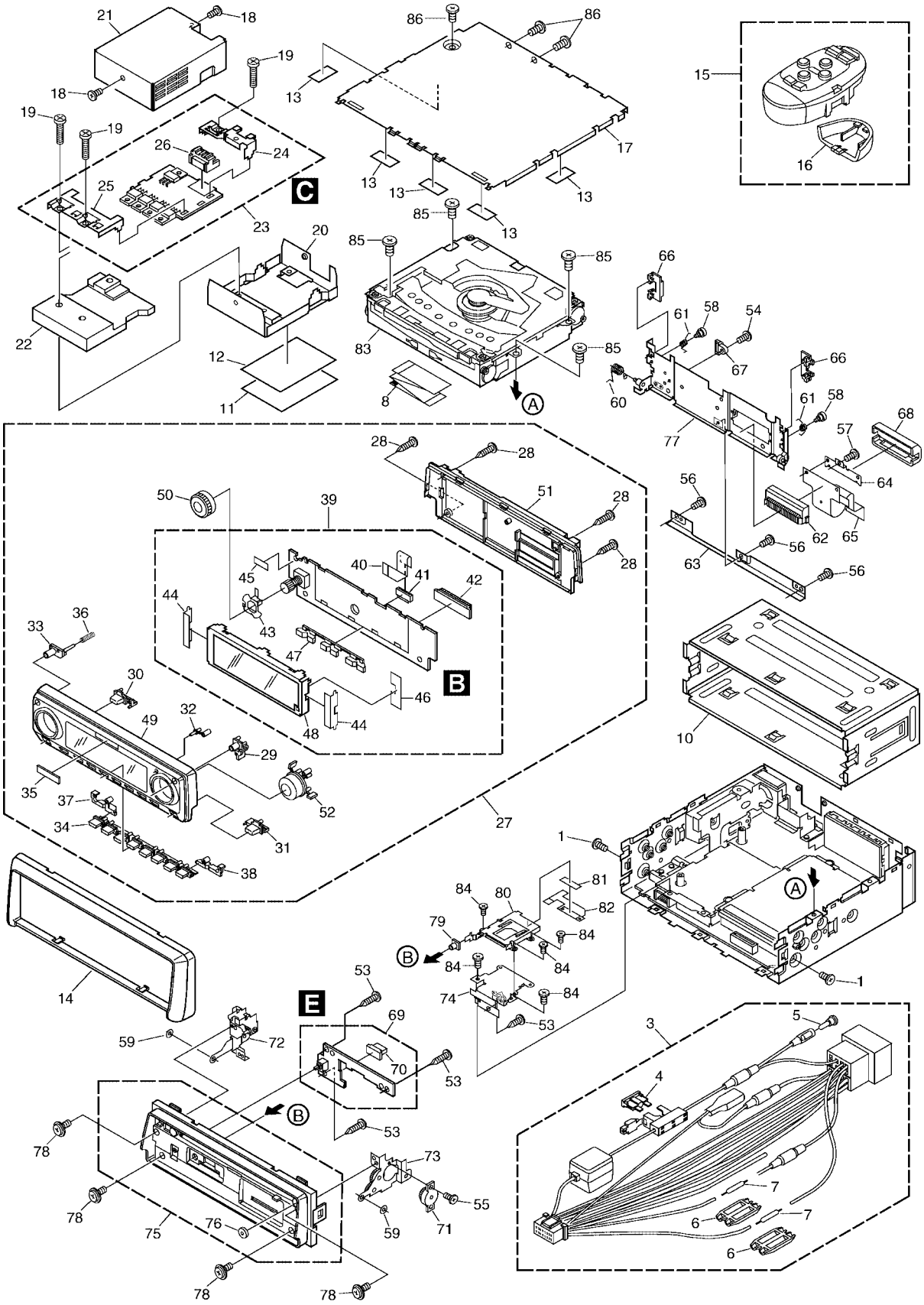
Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FMC
	2	•••••	
	3	Cord Assy	CDE6563
	4	Fuse(10A)	CEK1136
	5	•••••	
	6	Cap	CNS1472
	7	Resistor	RS1/2PMF102J
	8	Flat Cable	CDE6581
	9	•••••	
	10	Holder	CNC8659
	11	Fastener	CNM7652
	12	Fastener	CNM7651
	13	Cushion	CNM7732
	14	Panel	See Contrast table(2)
	15	Remote Control Assy	See Contrast table(2)
	16	Cover	See Contrast table(2)
	17	Case Unit	CXB7094
	18	Screw	BSZ26P060FMC
	19	Screw	BSZ26P160FMC
	20	Chassis	CNA2393
	21	Case	CNB2731
	22	Heat Sink	CNR1611
	23	Power Supply Unit	CWM7665
*	24	Holder	CNC9353
*	25	Holder	CNC9354
	26	Connector(CN2801)	CKM1343
	27	Detach Grille Assy	See Contrast table(2)
	28	Screw	BPZ20P080FZK
	29	Button	CAC6863
	30	Button	CAC6867
	31	Button	CAC6870
	32	Button	CAC6872
	33	Button	CAC6951
	34	Button	CAC7307
*	35	Badge	CAH1754
	36	Spring	CBH1844
	37	Lighting Conductor	CNV6557
	38	Lighting Conductor	CNV6674
	39	Keyboard Unit	CWM7664
	40	Connector	CDE6741
	41	Connector(CN1902)	CKS3995
	42	Connector(CN1901)	CKS4435
	43	Spacer	CNM7409
	44	Spacer	CNM7529
	45	Spacer	CNM7711
	46	Cushion	CNM7719
	47	Lighting Conductor	CNV6554
	48	OEL Module	MXK8014
	49	Grille Unit	See Contrast table(2)
	50	Knob Unit	CXB7084
	51	Cover Unit	CXB7086
	52	Button Unit	CXB7440
	53	Screw	BPZ20P060FMC
	54	Screw(M2x3)	CBA1082
	55	Screw(M2x2)	CBA1176
	56	Screw(M2x2.2)	CBA1419
	57	Screw(M2x2)	CBA1505
	58	Screw(M2x1.5)	CBA1528
	59	Washer	CBF1001
	60	Spring	CBH2319
	61	Spring	CBH2445
	62	Connector	CKS4436
	63	Holder	CND1001
	64	Holder	CND1002
	65	Flexible PCB	CNP6278
	66	Holder	CNV6575
	67	Guide	CNV6676
	68	Cover	CNV7238
	69	Panel Unit	CWM7826
	70	Connector(CN1801)	CKS4251
	71	Damper Unit	CXB4659
	72	Holder Unit	CXB7097
	73	Holder Unit	CXB7098
	74	Holder Assy	CXB7495
	75	Panel Unit	CXB7572
	76	Cushion	CNM5486
	77	Holder Unit	CXB8903
	78	Screw	IMS20P040FZK
	79	Button	CAC7112
	80	Connector	CKS4494
	81	Double Faced Tape	CNM7785
	82	Flexible PCB	CNP6279
	83	CD Mechanism Module(H2)	CXK5354
	84	Screw	IMS20P030FMC
	85	Screw	BSZ26P060FMC
	86	Screw	BSZ30P050FMC
	87	Remote Control Assy	See Contrast table(2)
	88	Battery Cover	See Contrast table(2)

(2) CONTRAST TABLE

DEH-P90HDD/UC and DEH-P900HDD/ES are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No. DEH-P90HDD/UC	Part No. DEH-P900HDD/ES
	14	Panel	CNS6665	CNS6669
	15	Remote Control Assy	CZX3246	Not used
	16	Cover	CZN7655	Not used
	27	Detach Grille Assy	CXB7474	CXB7475
	49	Grille Unit	CXB7081	CXB7082
	87	Remote Control Assy	Not used	CXB3875
	88	Battery Cover	Not used	CNS5032

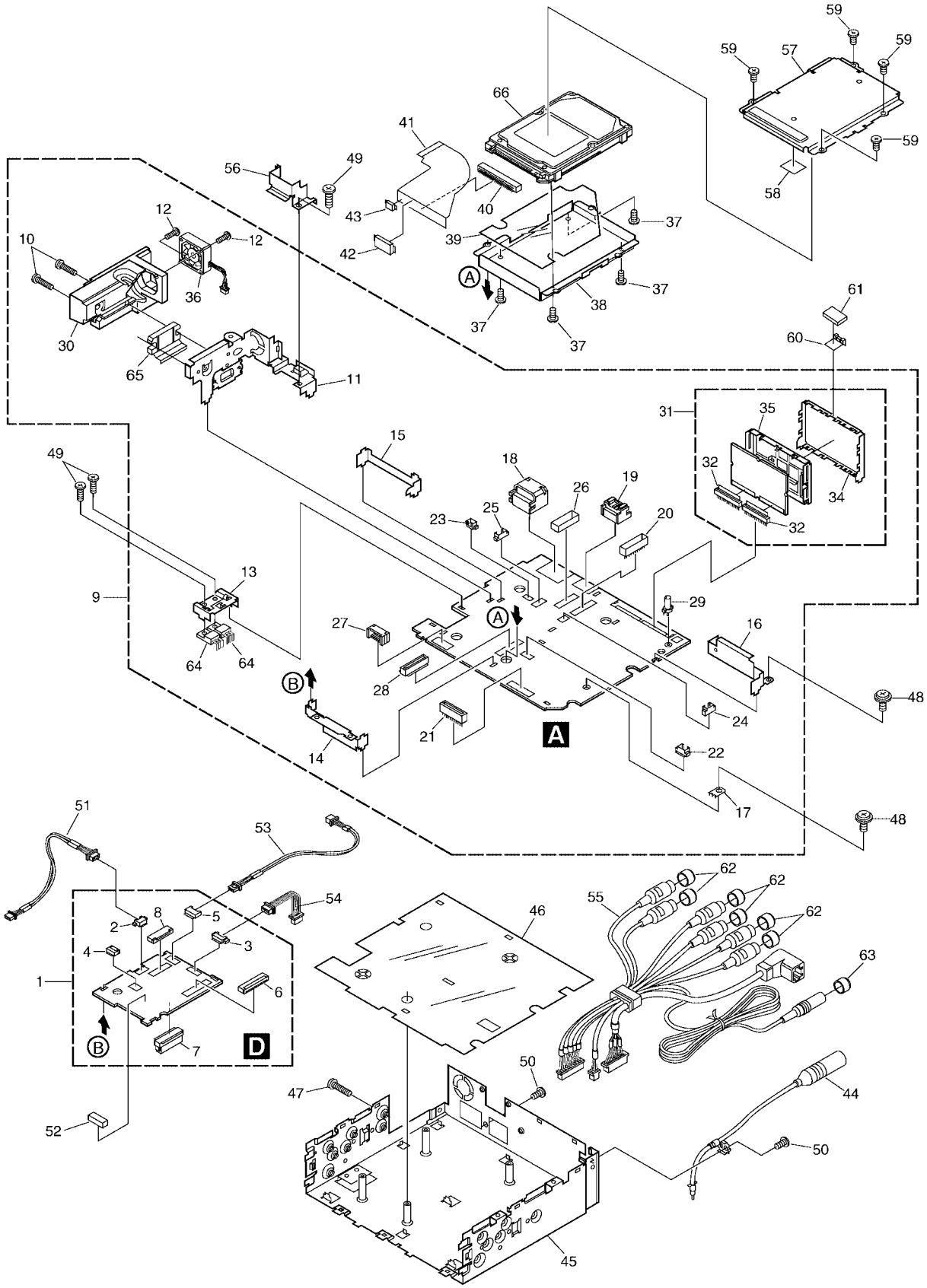
2.5 EXTERIOR(1)(DEH-P900HDD/EW)



● EXTERIOR(1)(DEH-P900HDD/EW) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FMC
	2	•••••	
	3	Cord Assy	CDE6562
	4	Fuse(10A)	CEK1136
	5	Cap	CKX-003
	6	Cap	CNS1472
	7	Resistor	RS1/2PMF102J
	8	Flat Cable	CDE6581
	9	•••••	
	10	Holder	CNC8659
	11	Fastener	CNM7652
	12	Fastener	CNM7651
	13	Cushion	CNM7732
	14	Panel	CNS6665
	15	Remote Control Assy	CZX3246
	16	Cover	CZN7655
	17	Case Unit	CXB7094
	18	Screw	BSZ26P060FMC
	19	Screw	BSZ26P160FMC
	20	Chassis	CNA2393
	21	Case	CNB2731
	22	Heat Sink	CNR1611
	23	Power Supply Unit	CWM7665
*	24	Holder	CNC9353
*	25	Holder	CNC9354
	26	Connector(CN2801)	CKM1343
	27	Detach Grille Assy	CXB7472
	28	Screw	BPZ20P080FZK
	29	Button	CAC6863
	30	Button	CAC6867
	31	Button	CAC6870
	32	Button	CAC6872
	33	Button	CAC6951
	34	Button	CAC7307
*	35	Badge	CAH1754
	36	Spring	CBH1844
	37	Lighting Conductor	CNV6557
	38	Lighting Conductor	CNV6674
	39	Keyboard Unit	CWM7664
	40	Connector	CDE6741
	41	Connector(CN1902)	CKS3995
	42	Connector(CN1901)	CKS4435
	43	Spacer	CNM7409
	44	Spacer	CNM7529
	45	Spacer	CNM7711
	46	Cushion	CNM7719
	47	Lighting Conductor	CNV6554
	48	OEL Module	MXK8014
	49	Grille Unit	CXB7080
	50	Knob Unit	CXB7084
	51	Cover Unit	CXB7086
	52	Button Unit	CXB7440
	53	Screw	BPZ20P060FMC
	54	Screw(M2x3)	CBA1082
	55	Screw(M2x2)	CBA1176
	56	Screw(M2x2.2)	CBA1419
	57	Screw(M2x2)	CBA1505
	58	Screw(M2x1.5)	CBA1528
	59	Washer	CBF1001
	60	Spring	CBH2319
	61	Spring	CBH2445
	62	Connector	CKS4436
	63	Holder	CND1001
	64	Holder	CND1002
	65	Flexible PCB	CNP6278
	66	Holder	CNV6575
	67	Guide	CNV6676
	68	Cover	CNV7238
	69	Panel Unit	CWM7826
	70	Connector(CN1801)	CKS4251
	71	Damper Unit	CXB4659
	72	Holder Unit	CXB7097
	73	Holder Unit	CXB7098
	74	Holder Assy	CXB7495
	75	Panel Unit	CXB7572
	76	Cushion	CNM5486
	77	Holder Unit	CXB8903
	78	Screw	IMS20P040FZK
	79	Button	CAC7112
	80	Connector	CKS4494
	81	Double Faced Tape	CNM7785
	82	Flexible PCB	CNP6279
	83	CD Mechanism Module(H2)	CXK5354
	84	Screw	IMS20P030FMC
	85	Screw	BSZ26P060FMC
	86	Screw	BSZ30P050FMC

2.6 EXTERIOR(2)



(1) EXTERIOR(2) SECTION PARTS LIST

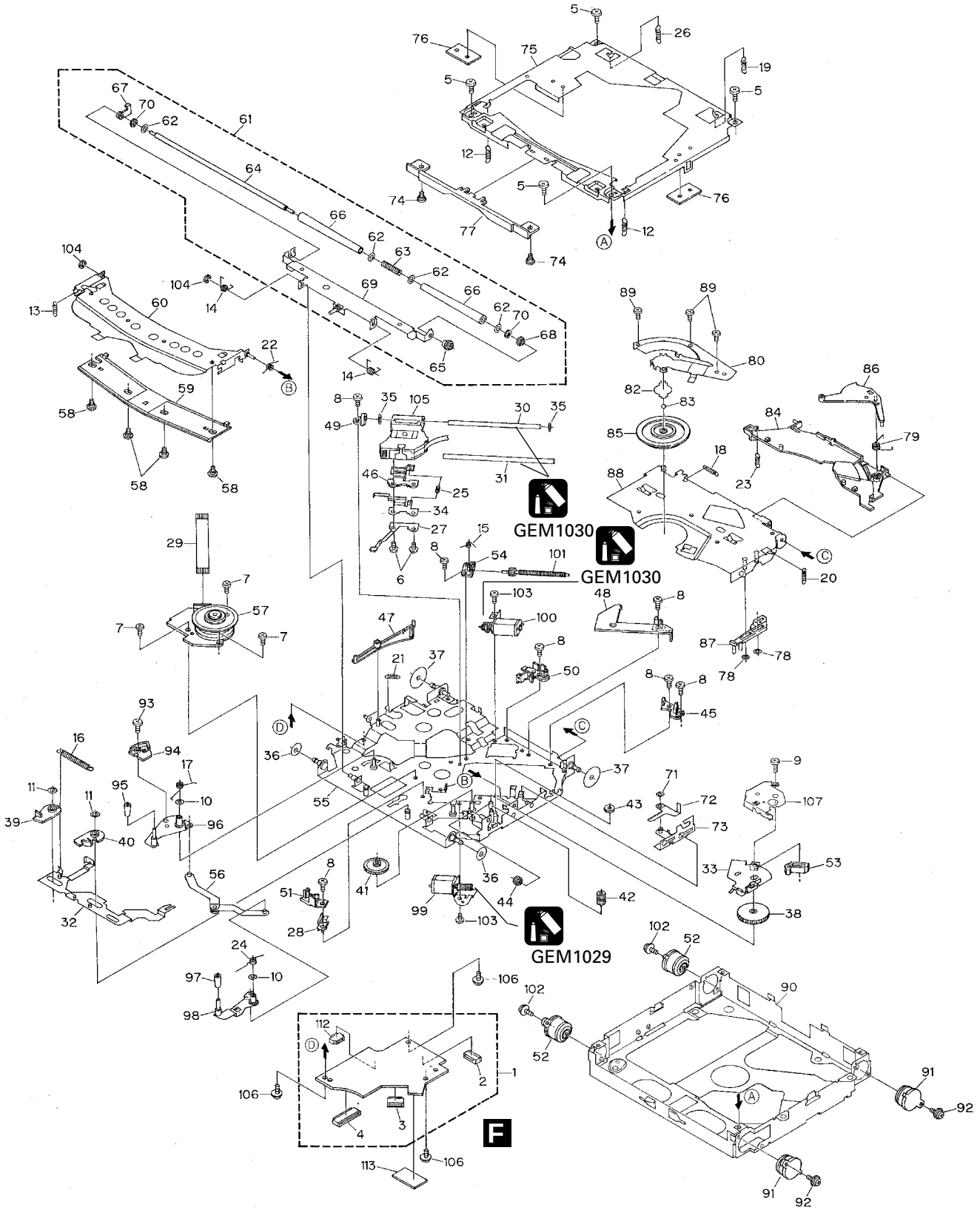
Mark	No.	Description	Part No.
	1	Digital Unit	CWM7667
	2	Connector(CN3002)	CKS2193
	3	Connector(CN3003)	CKS2195
	4	Connector(CN3301)	CKS3752
	5	Connector(CN3101)	CKS4439
	6	Connector(CN3201)	CKS4512
	7	Connector(CN3001)	CKS4513
	8	Connector(CN3102)	CKS4522
	9	Tuner Amp Unit	See Contrast table(2)
	10	Screw	BMZ26P160FMC
*	11	Holder	CNC9349
	12	Screw(M2.6x14)	CBA1384
*	13	Holder	CNC9350
*	14	Holder	CNC9351
*	15	Holder	CNC9352
*	16	Shield	CNC9365
	17	Terminal(CN202)	CKF1059
	18	Plug(CN901)	CKM1278
	19	Connector(CN702)	CKM1343
	20	Plug(CN101)	CKS1044
	21	Connector(CN801)	CKS1568
	22	Connector(CN371)	CKS2193
	23	Connector(CN591)	CKS3124
	24	Connector(CN131)	CKS3125
	25	Connector(CN701)	CKS3128
	26	Connector(CN351)	CKS3592
	27	Connector(CN802)	CKS4262
	28	Connector(CN703)	CKS4514
	29	Mini Pin Jack(CN451)	CKX1046
	30	Heat Sink	CNR1610
	31	FM/AM Tuner Unit	See Contrast table(2)
	32	Connector(CN1, 2)	CKS4276
	33	•••••	
	34	Case	CNC8713
	35	Holder(SH1)	CNC8708
	36	Fan Motor	CXM1186
	37	Screw	BMZ30P040FMC
*	38	Case	CNC9348
*	39	Insulator	CNM7201
	40	Connector	CKS4493
	41	Flexible PCB	CNP6277
	42	Capacitor(C3206)	CCH1300
	43	Capacitor(C3207)	CSZSR100M16
	44	Antenna Cable	CDH1310
	45	Chassis Unit	See Contrast table(2)
	46	Insulator	CNM7200
	47	Screw	BSZ30P200FMC
	48	Screw	ISS26P055FUC
	49	Screw	BSZ26P080FMC
	50	Screw	BSZ30P050FMC
	51	Cord	CDE6582
	52	Cushion	CNM7228
	53	Cord	CDE6583
	54	Cord	CDE6580
	55	Cord Assy	CDE6856
*	56	Holder	CNC9509
*	57	Cover	CNC9347
*	58	Insulator	CNM7202
	59	Screw	BSZ26P060FMC
	60	Earth Plate	CNC9459
	61	Spacer	CNM7366
	62	Cap	CNV6727
	63	Cap	CNW-829
	64	Transistor(Q913, 921)	2SD2396
	65	IC(IC301)	PAL006A
	66	HDD Assy(Service)	CXX1565

(2) CONTRAST TABLE

DEH-P90HDD/UC, DEH-P900HDD/EW and DEH-P900HDD/ES are constructed the same except for the following:

Mark No.	Symbol and Description	Part No.		
		DEH-P90HDD/UC	DEH-P900HDD/EW	DEH-P900HDD/ES
9	Tuner Amp Unit	CWM7824	CWM7823	CWM7825
31	FM/AM Tuner Unit	CWE1605	CWE1604	CWE1605
45	Chassis Unit	CXB7095	CXB7545	CXB7095

2.7 CD MECHANISM MODULE

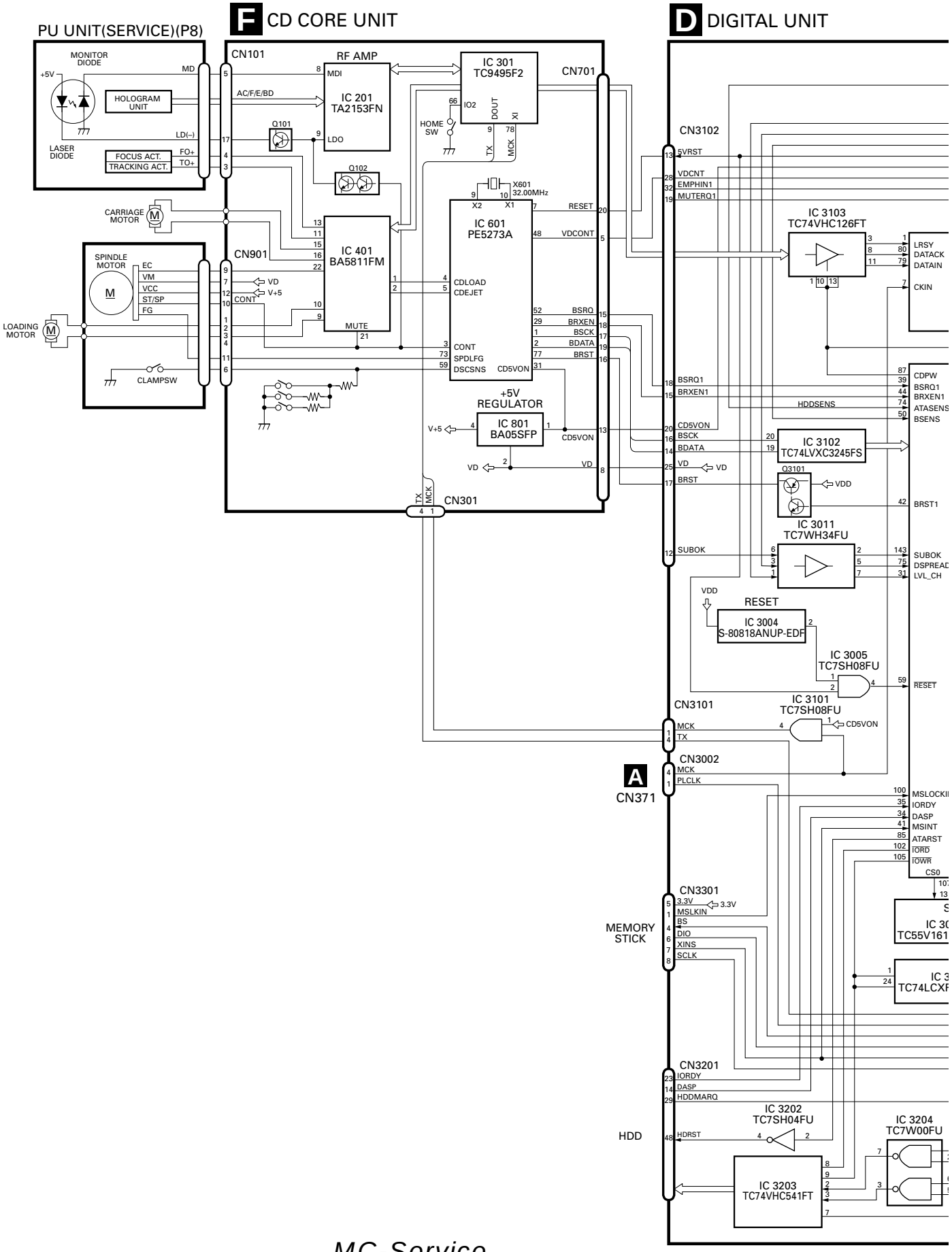


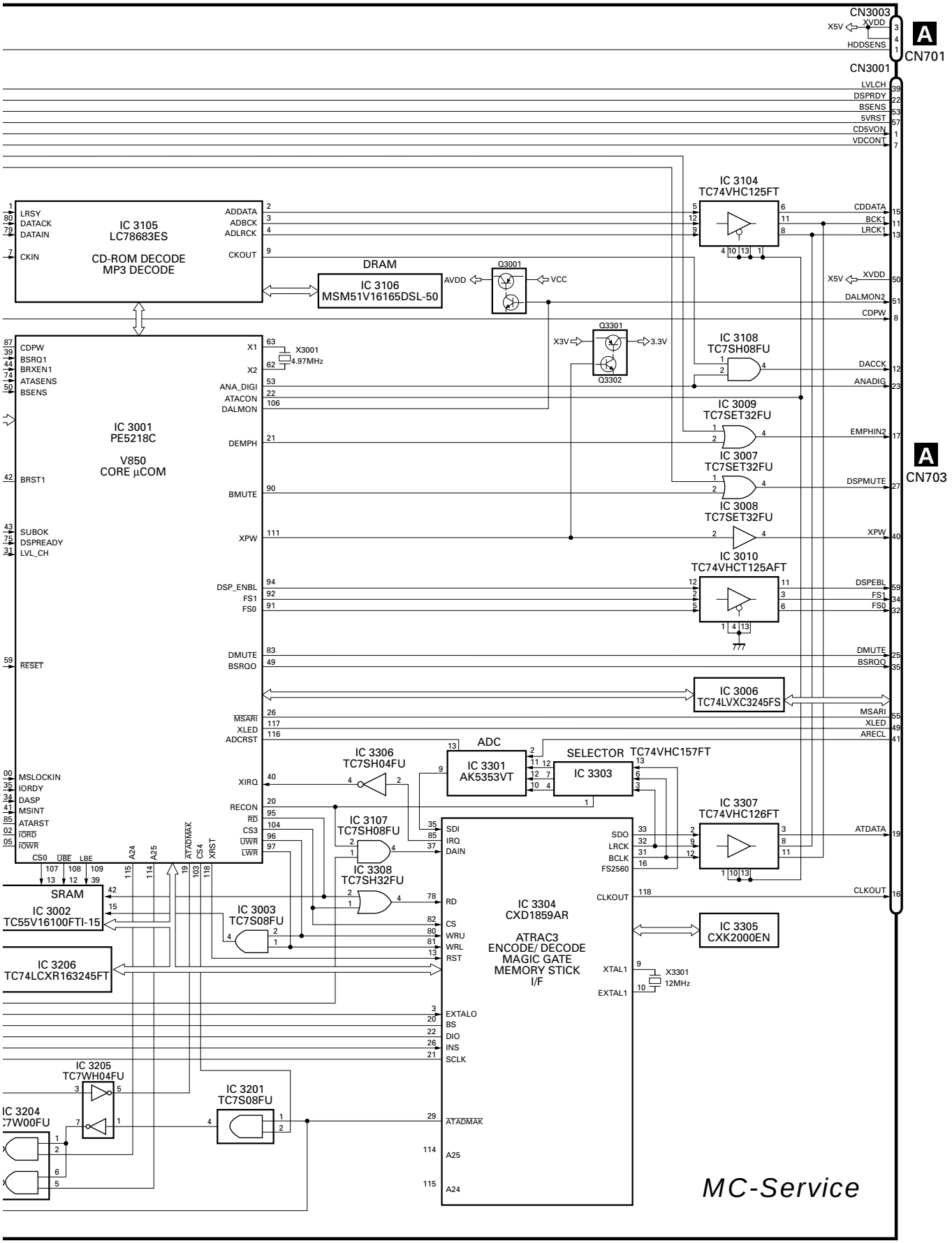
● CD MECHANISM MODULE SECTION PARTS LIST

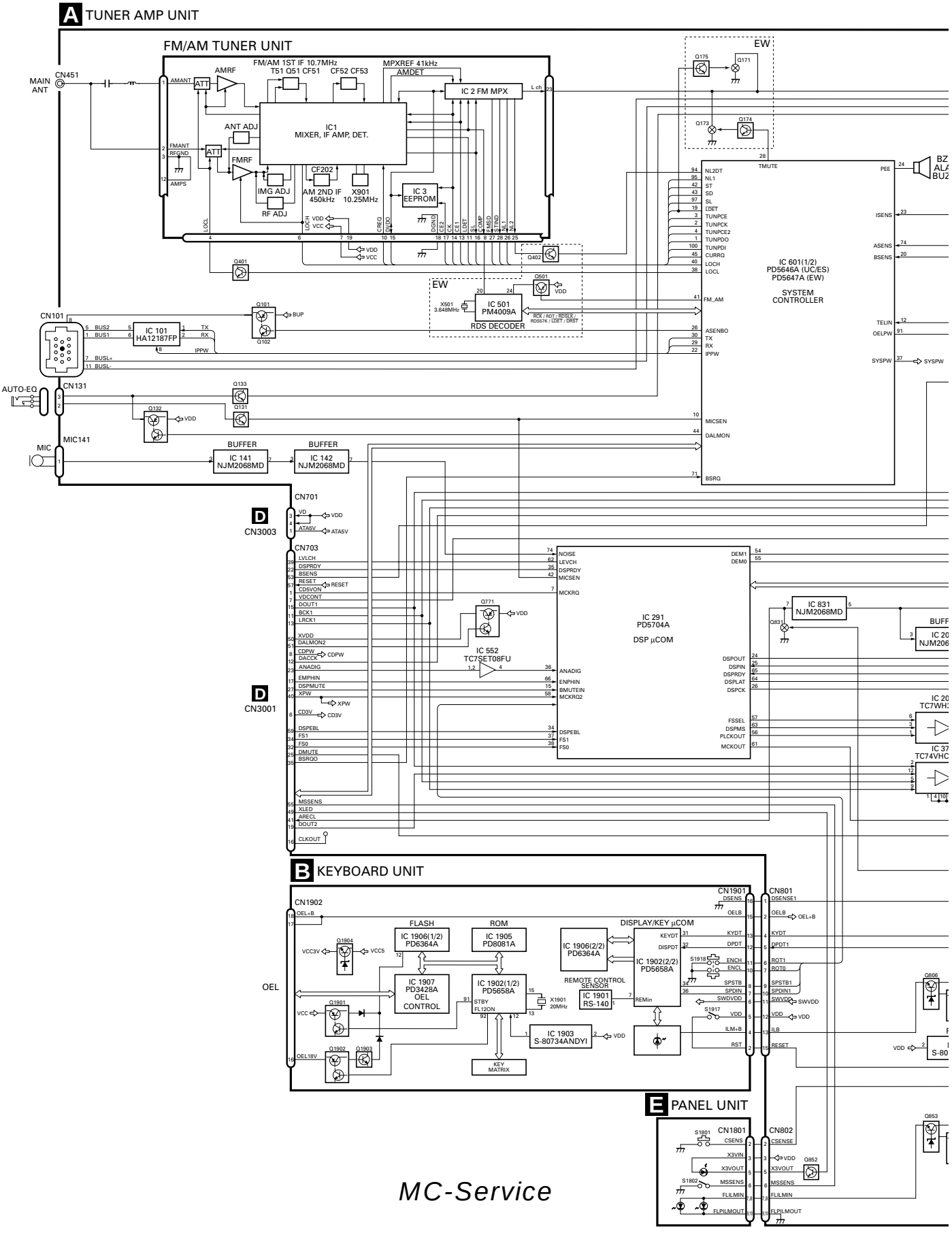
Mark	No.	Description	Part No.
	1	CD Core Unit	CWX2532
	2	Connector(CN101)	CKS3785
	3	Connector(CN901)	CKS4291
	4	Connector(CN701)	CKS4522
	5	Screw	BSZ20P035FMC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x2.5)	CBA1510
	8	Screw(M2x3)	CBA1511
	9	Screw(M2x6.2)	CBA1536
	10	Washer	CBF1037
	11	Washer	CBF1064
	12	Spring	CBH2291
	13	Spring	CBH2292
	14	Spring	CBH2293
	15	Spring	CBH2295
	16	Spring	CBH2297
	17	Spring	CBH2298
	18	Spring	CBH2299
	19	Spring	CBH2303
	20	Spring	CBH2304
	21	Spring	CBH2305
	22	Spring	CBH2308
	23	Spring	CBH2309
	24	Spring	CBH2332
	25	Spring	CBH2416
	26	Spring	CBH2434
	27	Spring	CBL1448
	28	Spring	CBL1466
	29	Connector	CDE6099
	30	Shaft	CLA3683
	31	Shaft	CLA3684
	32	Lever	CNC8501
	33	Bracket	CNC8507
	34	Bracket	CNC8509
	35	Cushion	CNM6301
	36	Sheet	CNM6773
	37	Sheet	CNM6774
	38	Gear	CNR1559
	39	Arm	CNV5928
	40	Arm	CNV5929
	41	Gear	CNV5930
	42	Gear	CNV5932
	43	Gear	CNV5931
	44	Gear	CNV5933
	45	Holder	CNV5943
	46	Holder	CNV5944
	47	Arm	CNV5948
	48	Cover	CNV5950
	49	Holder	CNV5951
	50	Holder	CNV6222
	51	Holder	CNV6223
	52	Damper	CNV6426
	53	Holder	CNV6446
	54	Holder	CNV6512
	55	Chassis Unit	CXB4501
	56	Arm Unit	CXB4503
	57	Motor Unit(M3)	CXB6620
	58	Screw(M2x1.2)	CBA1495
	59	Guide	CNV5925
	60	Arm Unit	CXB5311
	61	Loading Arm Assy(-G)	CXB5715
	62	Washer	CBF1060
	63	Spring	CBH2170
*	64	Shaft	CLA3678
*	65	Gear	CNV5934
	66	Roller	CNV6068
	67	Holder	CNV6210
	68	Collar	CNV6439
	69	Arm Unit	CXB5686
	70	Washer	YE20FUC
	71	Washer	CBF1038
	72	Arm	CNC8498
	73	Lever Unit	CXB4502
	74	Screw(M2x1.5)	CBA1509
	75	Frame	CNC8497
	76	Sheet	CNM6951
	77	Guide	CNV5924
	78	Washer	CBF1037
	79	Spring	CBH2300
	80	Spring	CBL1446
	81	•••••	
	82	Spacer	CNM6467
	83	Ball	CNR1189
	84	Guide	CNV5945
	85	Clamper	CNV5946
	86	Arm	CNV5947
	87	Lever	CNV5949
	88	Arm Unit	CXB4505
	89	Screw	JFZ20P020FMC
	90	Frame	CNC8496
	91	Damper	CNV6426
	92	Screw	ISS20P060FMC
	93	Screw(M2x3)	CBA1511
	94	Holder	CNV6341
	95	Roller	CNV6389
	96	Arm Unit	CXB5970
	97	Roller	CNV6389
	98	Arm Unit	CXB5971
	99	Load Motor Assy(-D)(M2)	CXB6340
	100	Carriage Motor Assy(-D)(M1)	CXB6361
	101	Screw Unit(-B)	CXB6363
	102	Screw	ISS20P060FMC
	103	Screw	JFZ20P025FNI
	104	Washer	YE15FUC
	105	Pickup Unit(Service)(P8)	CXX1305
	106	Screw	IMS20P030FMC
*	107	Cover	CNC9151
	108-111	•••••	
	112	Connector(CN301)	CKS4439
	113	Spacer	CNM7805

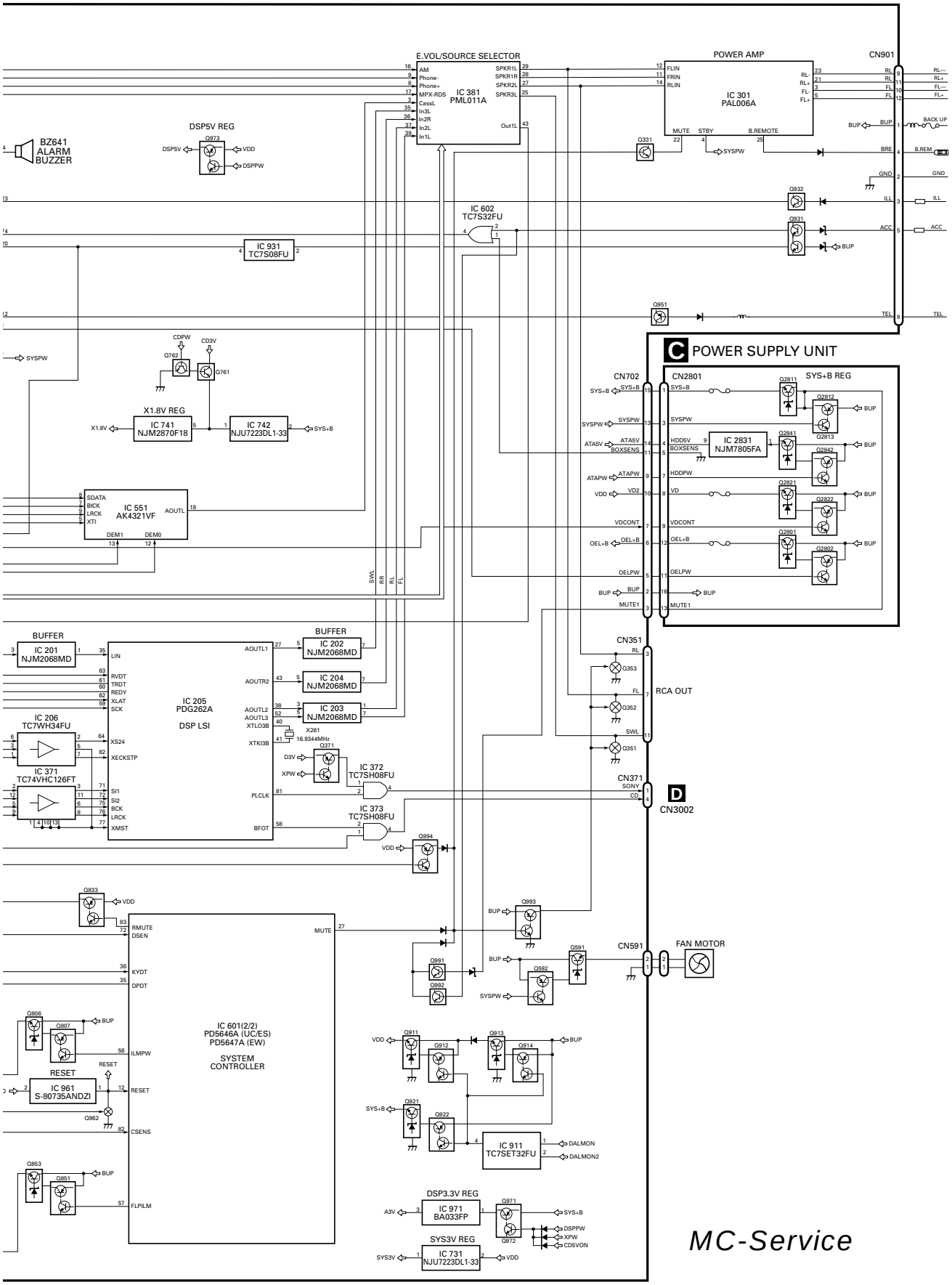
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM




CN3003
X5V
XVDD
HDDSENS
A
CN701
CN3001
LVLCH
DSPRDY
BSENS
5VRST
CD5VON
VDCONT
IC 3104
TC74VHC125FT
CDDATA
BCK1
LRCK1
IC 3105
LC78683ES
CD-ROM DECODE
MP3 DECODE
LRSY
DATACK
DATAIN
CKIN
ADDATA
ADBCK
ADLRCK
CKOUT
DRAM
IC 3106
MSM51V16165DSL-50
AVDD
Q3001
VCC
X5V
XVDD
DALMON2
CDPW
Q3301
X3V
3.3V
Q3302
IC 3108
TC7SH08FU
DACK
ANADIG
X3001
4.97MHz
X1
X2
ANA_DIGI
ATACON
DALMON
IC 3009
TC7SET32FU
EMPHIN2
IC 3001
PE5218C
V850
CORE µCOM
DEMPH
BMUTE
IC 3007
TC7SET32FU
DSPMUTE
A
CN703
IC 3008
TC7SET32FU
XPW
BRST1
SUBOK
DSPREADY
LVL_CH
IC 3010
TC74VHCT125AFT
DSP_ENBL
FS1
FS0
DSPEBL
FS1
FS0
DMUTE
BSRQO
RESET
IC 3006
TC74LVXC3245FS
MSARI
XLED
ADCRST
ADC
IC 3301
AK5353VT
SELECTOR
IC 3303
TC74VHC157FT
IC 3306
TC7SH04FU
XIRQ
RECON
RD
CS3
UWR
LWR
IC 3307
TC74VHC126FT
ATDATA
MSLOCKIN
IORDY
DASP
MSINT
ATARST
IORD
IOWR
IC 3107
TC7SH08FU
SDI
IRQ
DAIN
SDO
LRCK
BCLK
FS2560
IC 3308
TC7SH32FU
SRAM
IC 3002
TC55V16100FTI-15
IC 3003
TC7S08FU
IC 3304
CXD1859AR
ATRAC3
ENCODE/ DECODE
MAGIC GATE
MEMORY STICK
I/F
CLKOUT
IC 3305
CXK2000EN
IC 3206
TC74LCXR163245FT
XTAL1
EXTAL1
X3301
12MHz
EXTALO
BS
DIO
INS
SCLK
IC 3205
TC7WH04FU
IC 3201
TC7S08FU
IC 3204
ATADMAK
A25
A24
MC-Service

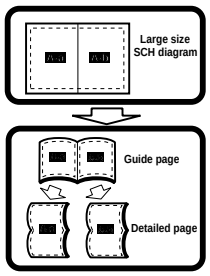

A TUNER AMP UNIT
FM/AM TUNER UNIT
MAIN ANT
CN451
AMANT
ATT
AMRF
FM/AM 1ST IF 10.7MHz
T51 Q51 CF51
CF52 CF53
MPXREF 41kHz
AMDET
IC 2 FM MPX
L ch
ANT ADJ
IC1
MIXER, IF AMP, DET.
FMANT
RFGND
AMPS
FMRF
IMG ADJ
RF ADJ
CF202
AM 2ND IF
450kHz
X901
10.25MHz
IC 3
EEPROM
LOCL
LOCH
VDD
VCC
CREQ
CLKO
DGND
CE2
CK
DAT
LRST
SEL
COMP
XMSD
XTINO
XOUT
XIN2
Q401
Q402
EW
Q175
Q171
Q173
Q174
TMUTE
IC 601(1/2)
PD5646A (UC/ES)
PD5647A (EW)
SYSTEM
CONTROLLER
NL2DT
NL1
ST
SD
SL
LDET
TUNPCE
TUNPCK
TUNPCE2
TUNPDO
TUNPDI
CURRQ
LOCH
LOCL
FM_AM
ASENBO
TX
RX
IPPW
MICSEN
DALMON
BSRQ
PEE
ISENS
ASENS
BSENS
TELIN
OELPW
SYSPW
BZ
ALA
BU2
Q501
X501
3.648MHz
IC 501
PM4009A
RDS DECODER
RCK / RDT / RDSLK /
RDS57K / LDET / DRST
CN101
BUS2
BUS1
IC 101
HA12187FP
TX
RX
IPPW
BUSL+
BUSL-
Q101
Q102
BUP
AUTO-EQ
CN131
Q133
Q131
Q132
VDD
MIC
MIC141
BUFFER
IC 141
NJM2068MD
IC 142
NJM2068MD
D
CN3003
CN701
VD
ATA5V
D
CN3001
CN703
LVLCH
DSPRDY
BSENS
RESET
CD5VON
VDCONT
DOUT1
BCK1
LRCK1
XVDD
DALMON2
CDPW
DACCK
ANADIG
EMPHIN
DSPMUTE
XPW
CD3V
DSPEBL
FS1
FS0
DMUTE
BSRQO
MSSENS
XLED
ARECL
DOUT2
CLKOUT
IC 291
PD5704A
DSP µCOM
NOISE
LEVCH
DSPRDY
MICSEN
MCKRQ
ANADIG
ENPHIN
BMUTEIN
MCKRQ2
DSPEBL
FS1
FS0
DEM1
DEM0
DSPOUT
DSPIN
DSPRDY
DSPLAT
DSPCK
FSSEL
DSPMS
PLCKOUT
MCKOUT
Q771
IC 552
TC7SET08FU
IC 831
NJM2068MD
Q831
IC 20
TC7WH
IC 37
TC74VHC
B KEYBOARD UNIT
CN1902
OEL+B
OEL
CN1901
DSENS
OELB
KEYDT
DISPDT
ENCH
ENCL
SPSTB
SPDIN
SWDVDD
VDD
ILM+B
RST
CN801
DSENSE1
OELB
OEL+B
KYDT
DPDT
ROT1
ROT0
SPSTB1
SPDIN1
SWVDD
VDD
ILB
RESET
FLASH
IC 1906(1/2)
PD6364A
ROM
IC 1905
PD8081A
IC 1906(2/2)
PD6364A
DISPLAY/KEY µCOM
IC 1902(2/2)
PD5658A
IC 1907
PD3428A
OEL
CONTROL
IC 1902(1/2)
PD5658A
STBY
FL12ON
REMOTE CONTROL
SENSOR
IC 1901
RS-140
REMin
X1901
20MHz
IC 1903
S-80734ANDYI
KEY
MATRIX
Q1904
VCC3V
VCC5
Q1901
VCC
Q1902
Q1903
OEL18V
S1918
S1917
Q806
E PANEL UNIT
CN1801
CSENS
X3VIN
X3VOUT
MSSENS
FLILMIN
FLPILMOUT
CN802
CSENSE
X3VOUT
MSSENS
FLILMIN
FLPILMOUT
S1801
S1802
Q852
Q853

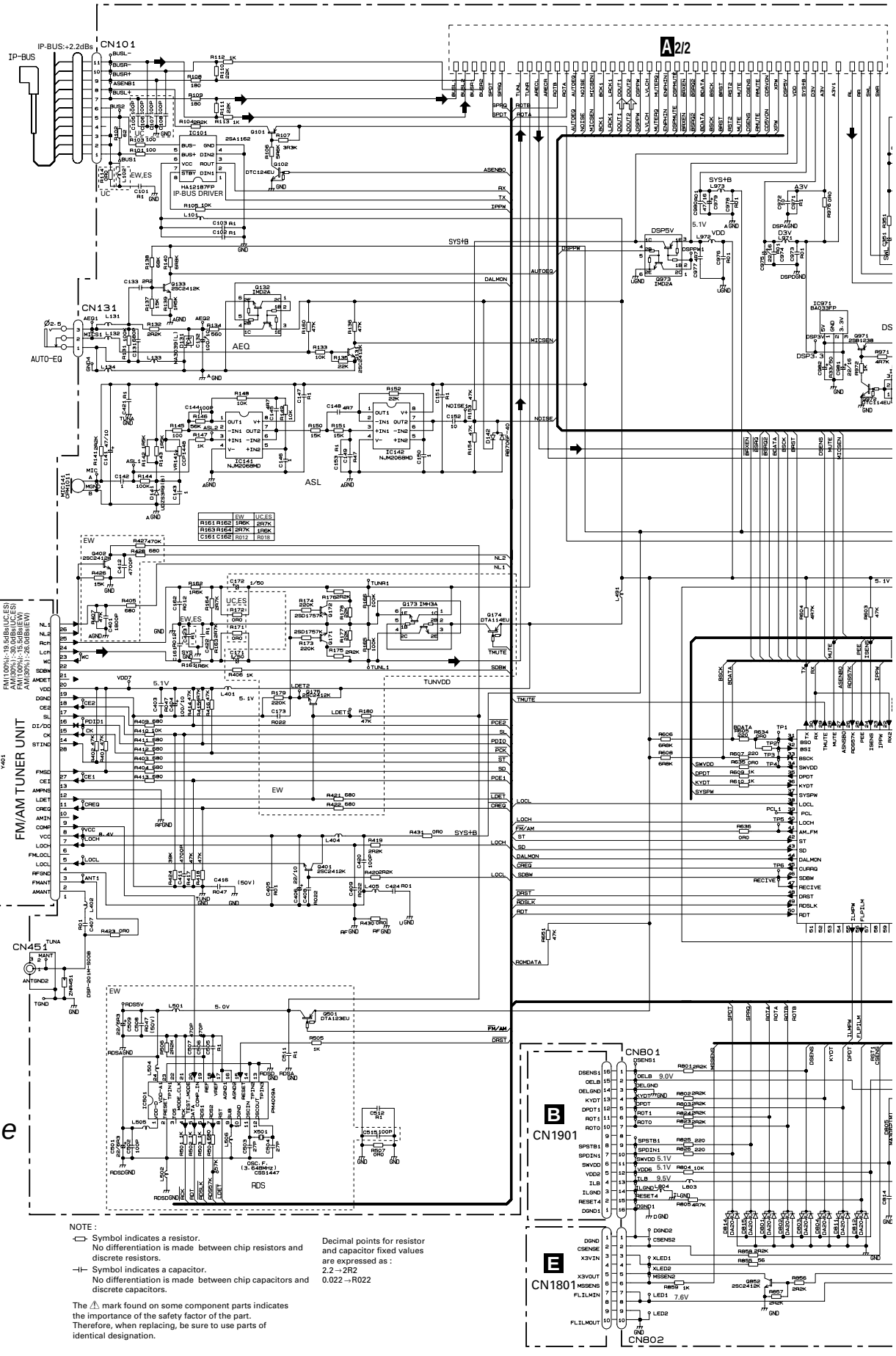

E.VOL/SOURCE SELECTOR
IC 381
PML011A
POWER AMP
IC 301
PAL006A
CN901
BZ641
ALARM
BUZZER
DSP5V REG
Q973
IC 931
TC7S08FU
IC 602
TC7S32FU
Q932
Q931
Q951
CDPW
CD3V
Q762
Q761
X1.8V REG
IC 741
NJM2870F18
IC 742
NJU7223DL1-33
IC 551
AK4321VF
C POWER SUPPLY UNIT
CN702
CN2801
SYS+B REG
IC 2831
NJM7805FA
CN351
RCA OUT
CN371
CN3002
BUFFER
IC 201
NJM2068MD
IC 202
NJM2068MD
IC 204
NJM2068MD
IC 203
NJM2068MD
IC 205
PDG262A
DSP LSI
IC 206
TC7WH34FU
IC 371
TC74VHC126FT
X261
16.9344MHz
IC 372
TC7SH08FU
IC 373
TC7SH08FU
CN591
FAN MOTOR
IC 601(2/2)
PD5646A (UC/ES)
PD5647A (EW)
SYSTEM
CONTROLLER
IC 961
S-80735ANDZI
IC 911
TC7SET32FU
DSP3.3V REG
IC 971
BA033FP
SYS3V REG
IC 731
NJU7223DL1-33
MC-Service

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

A-a 1/2

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".





NOTE :

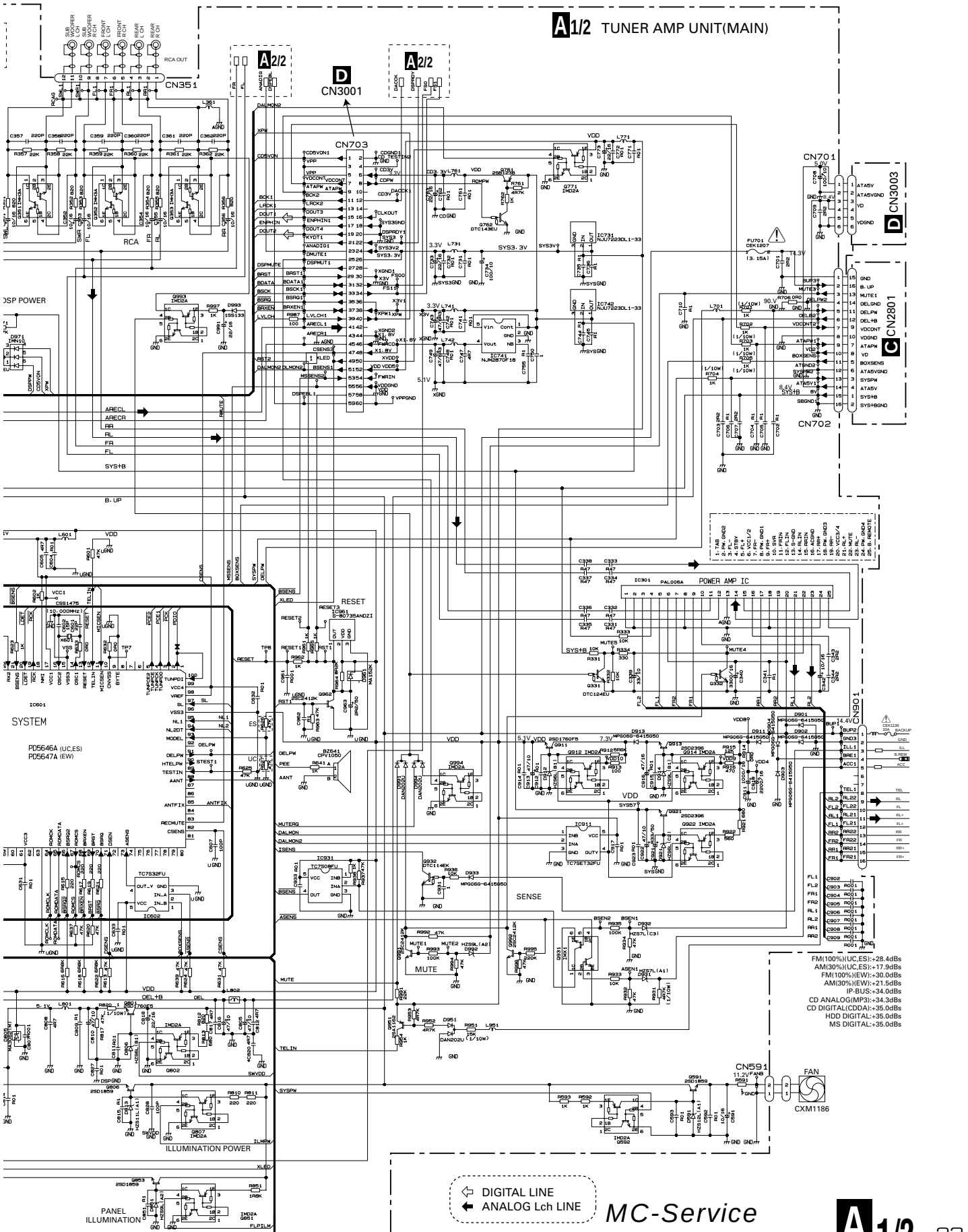
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

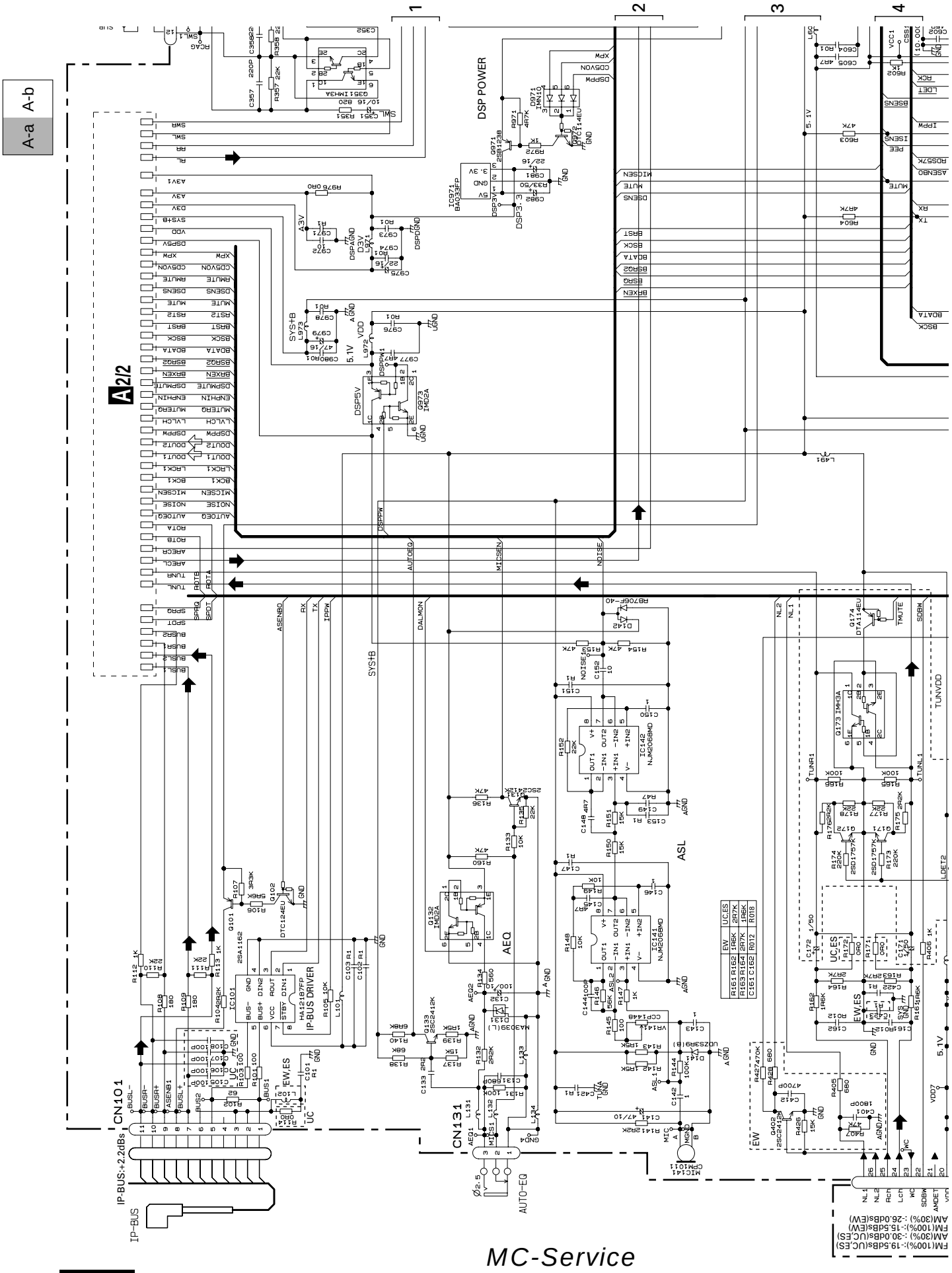
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

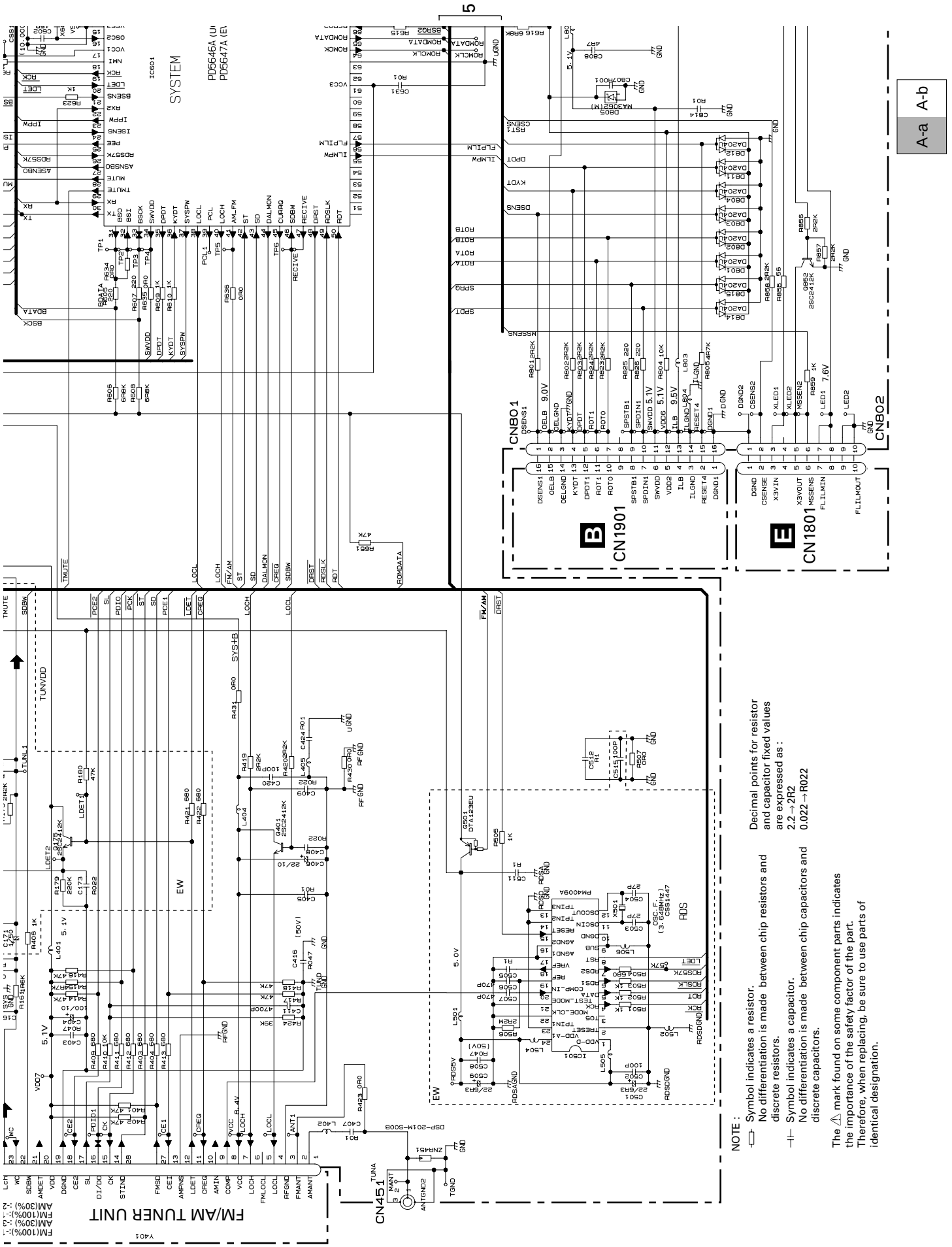
MC-Service

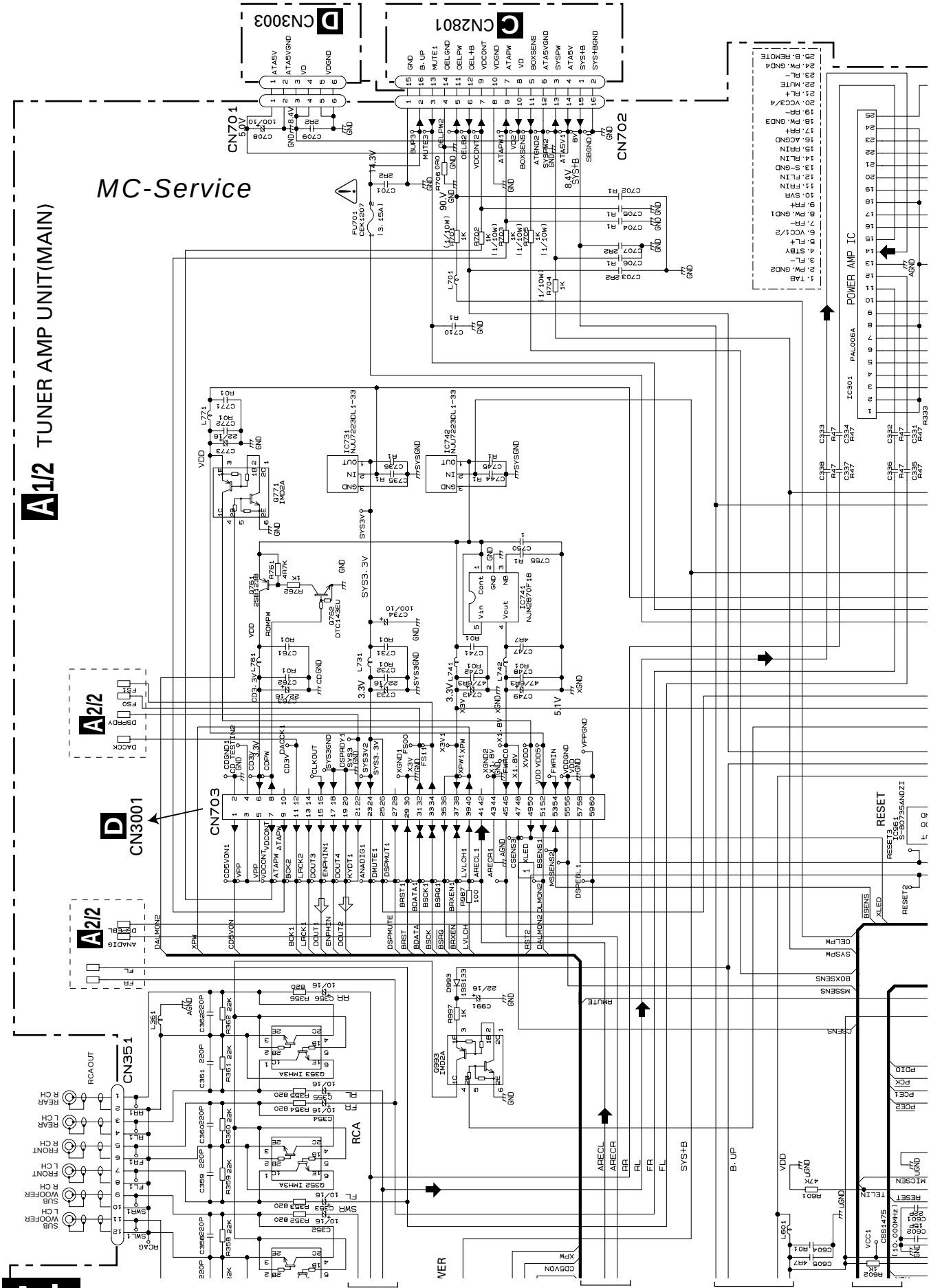
A-b 1/2

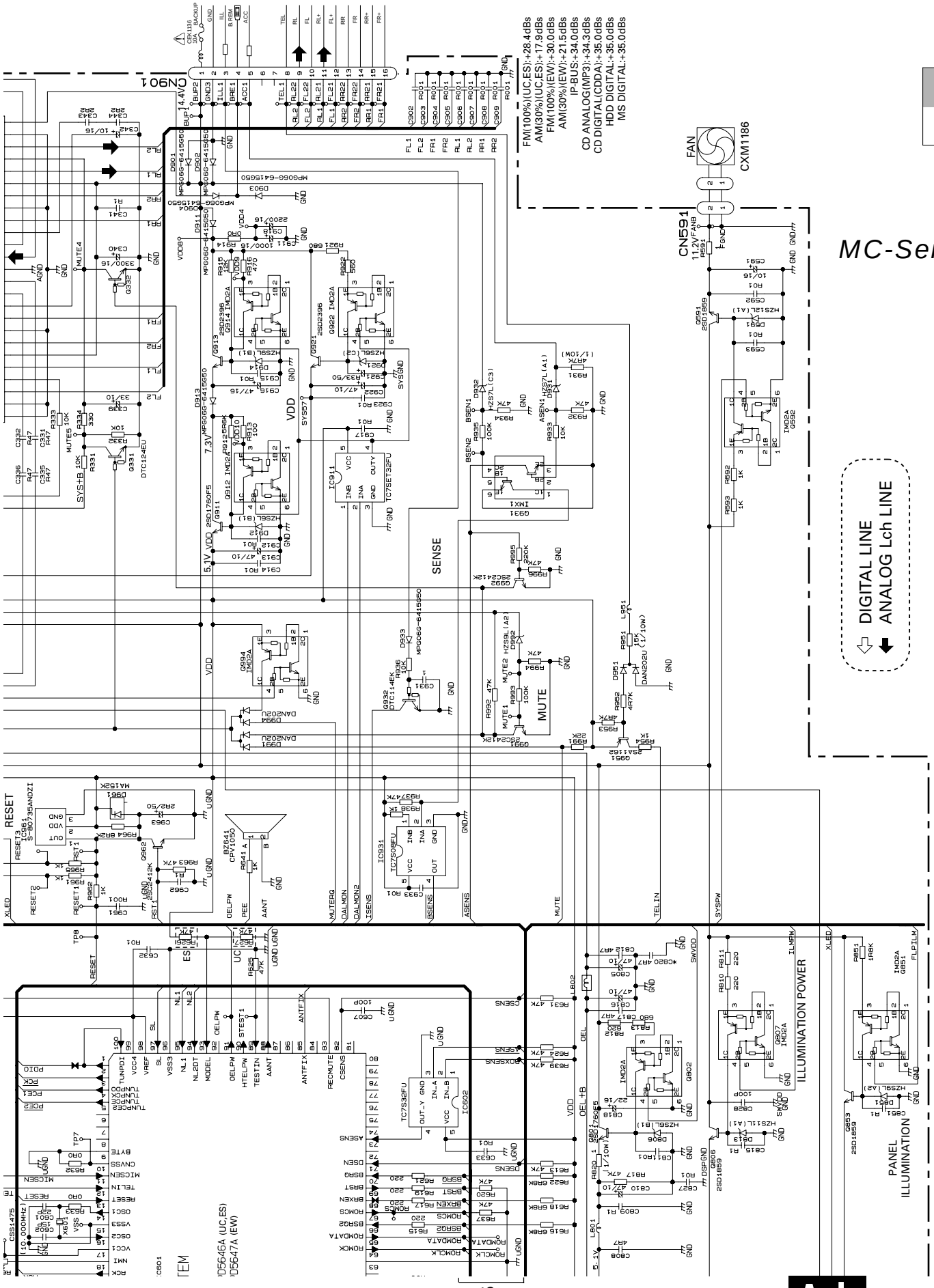

A1/2 TUNER AMP UNIT(MAIN)
CN351
CN3001
CN703
CN701
CN3003
CN2801
CN702
CN901
CN591
IC301 PAL006A POWER AMP IC
IC601 SYSTEM
PD5646A (UC,ES)
PD5647A (EW)
RESET
SENSE
MUTE
ILLUMINATION POWER
PANEL ILLUMINATION
FAN
CXM1186
DIGITAL LINE
ANALOG Lch LINE
FM(100%)(UC,ES):+28.4dBs
AM(30%)(UC,ES):+17.9dBs
FM(100%)(EW):+30.0dBs
AM(30%)(EW):+21.5dBs
IP-BUS:+34.0dBs
CD ANALOG(MP3):+34.3dBs
CD DIGITAL(CDDA):+35.0dBs
HDD DIGITAL:+35.0dBs
MS DIGITAL:+35.0dBs


A-b
A-a
A2/2
DSP POWER
IP-BUS DRIVER
AEQ
ASL
AUTO-EQ
CN101
CN131
IP-BUS
IP-BUS:+2.2dBs
FM(100%):-19.5dBs(UC,ES)
FM(30%):-30.0dBs(UC,ES)
FM(100%):-15.5dBs(EW)
AM(30%):-26.0dBs(EW)

MC-Service

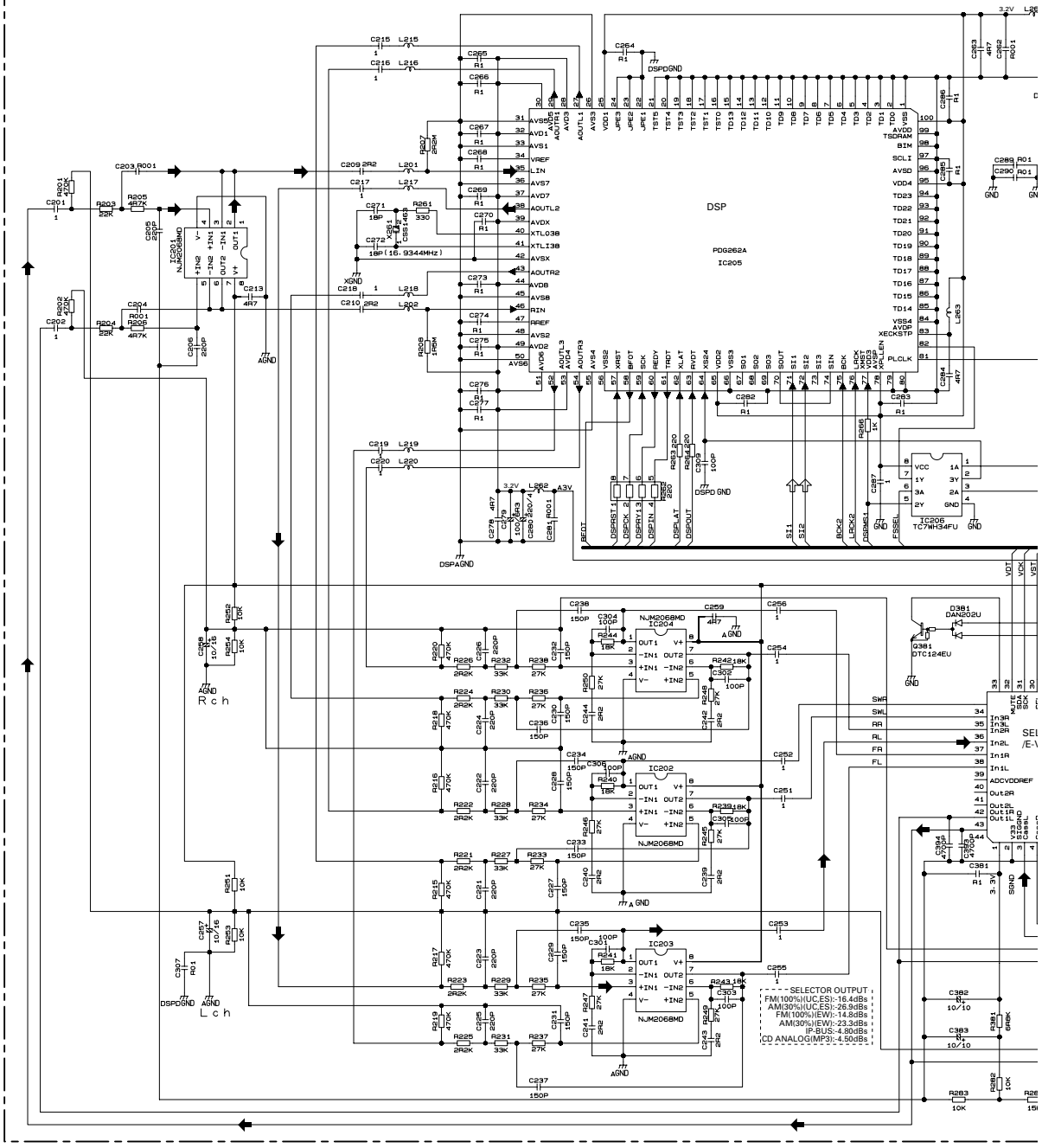

A-a A-b
SYSTEM
IC601
PD5646A (U
PD5647A (E
CN801
CN802
CN1901
CN1801
FM/AM TUNER UNIT
CN451
EW
RDS
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022


A-b
A-a
MC-Service
A1/2 TUNER AMP UNIT(MAIN)
A2/2
A2/2
D CN3001
CN703
CN3511
RCA
CN701
CN702
D CN3003
C CN2801
POWER AMP IC
IC301 PA1006A
RESET
A-b 1/2

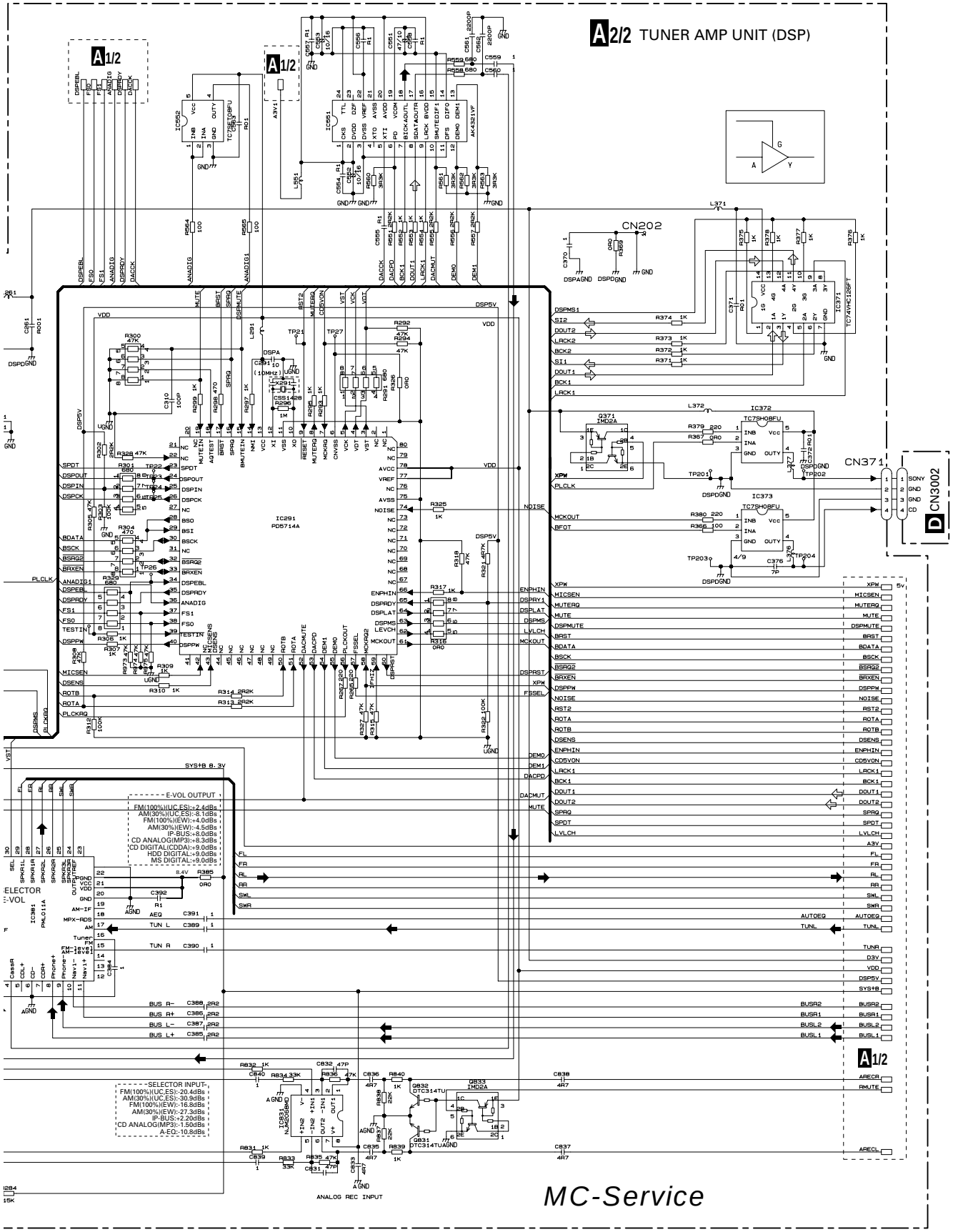

A-a A-b
MC-Service
DIGITAL LINE
ANALOG Lch LINE
CN901
CN591
FAN
CXM1186
SENSE
MUTE
RESET
ILLUMINATION POWER
PANEL ILLUMINATION
FM(100%)(UC,ES):+28.4dBs
AM(30%)(UC,ES):+17.9dBs
FM(100%)(EW):+30.0dBs
AM(30%)(EW):+21.5dBs
IP-BUS:+34.0dBs
CD ANALOG(MP3):+34.3dBs
CD DIGITAL(CDDA):+35.0dBs
HDD DIGITAL:+35.0dBs
MS DIGITAL:+35.0dBs
D5546A (UC,ES)
D5547A (EW)
A-b 1/2

3.3 TUNER AMP UNIT 2/2 (DSP)(GUIDE PAGE)

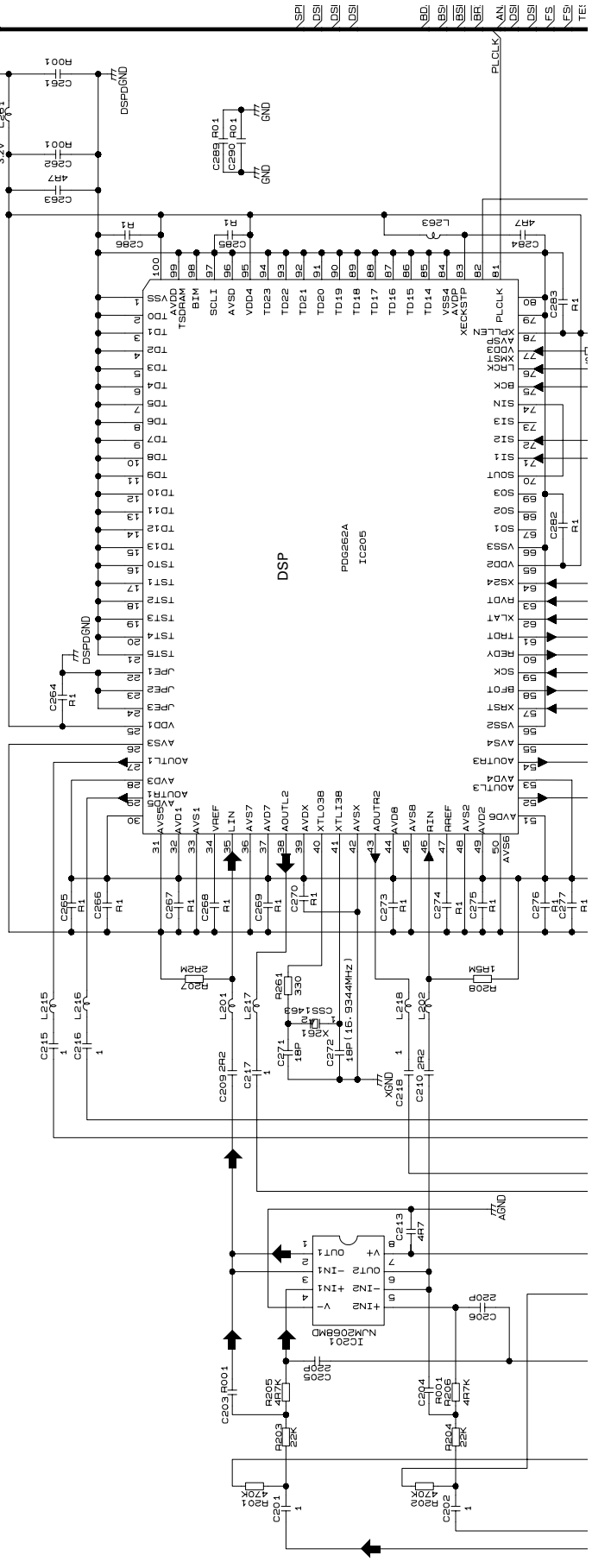
MC-Service



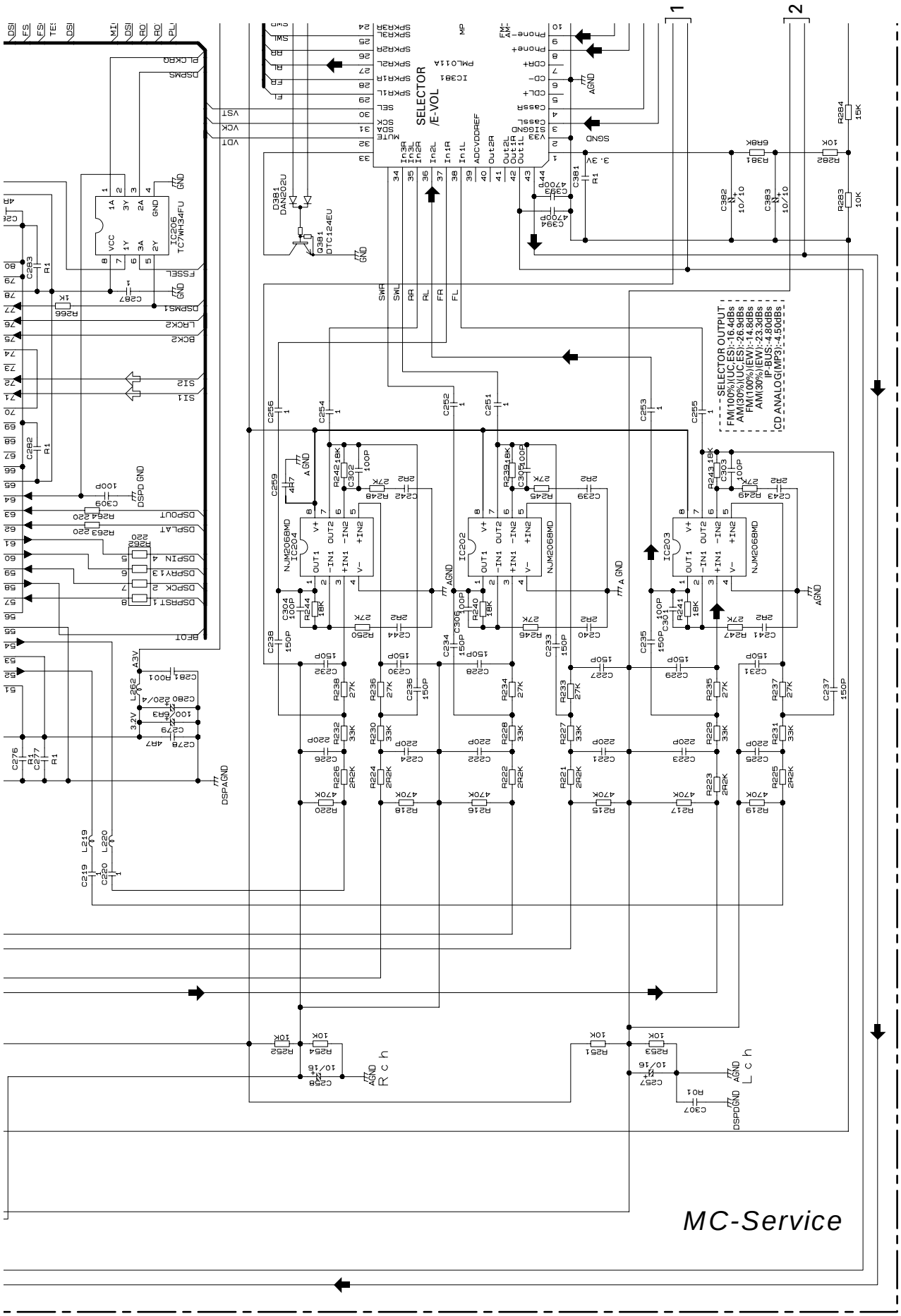
A-b 2/2


A2/2 TUNER AMP UNIT (DSP)
A1/2
A1/2
A1/2
CN202
CN371
CN3002
IC291
PD5714A
IC372
IC373
IC371
TC7SH08FU
TC74VHC126FT
IC1381
PML011A
IC831
NJM2068M
Q831
DTC314TU
Q832
DTC314TU
Q833
IMD2A
Q371
IMD2A
E-VOL OUTPUT
FM(100%)(UC,ES):+2.4dBs
AM(30%)(UC,ES):-8.1dBs
FM(100%)(EW):+4.0dBs
AM(30%)(EW):-4.5dBs
IP-BUS:+8.0dBs
CD ANALOG(MP3):+8.3dBs
CD DIGITAL(CDDA):+9.0dBs
HDD DIGITAL:+9.0dBs
MS DIGITAL:+9.0dBs
SELECTOR INPUT
FM(100%)(UC,ES):-20.4dBs
AM(30%)(UC,ES):-30.9dBs
FM(100%)(EW):-16.8dBs
AM(30%)(EW):-27.3dBs
IP-BUS:+2.20dBs
CD ANALOG(MP3):-1.50dBs
A-EQ:-10.8dBs
ANALOG REC INPUT
SELECTOR
E-VOL
MC-Service

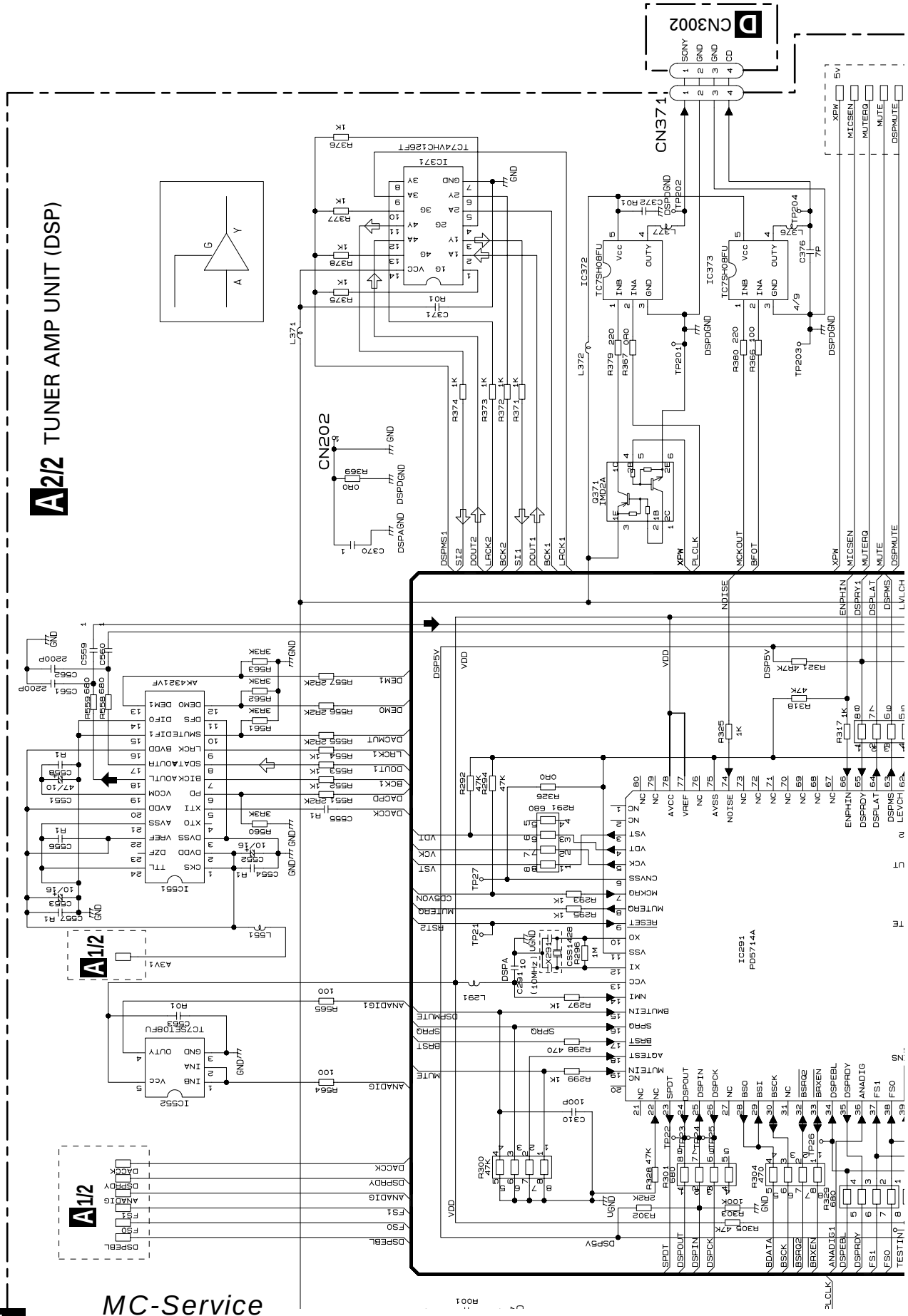
A-b
A-a



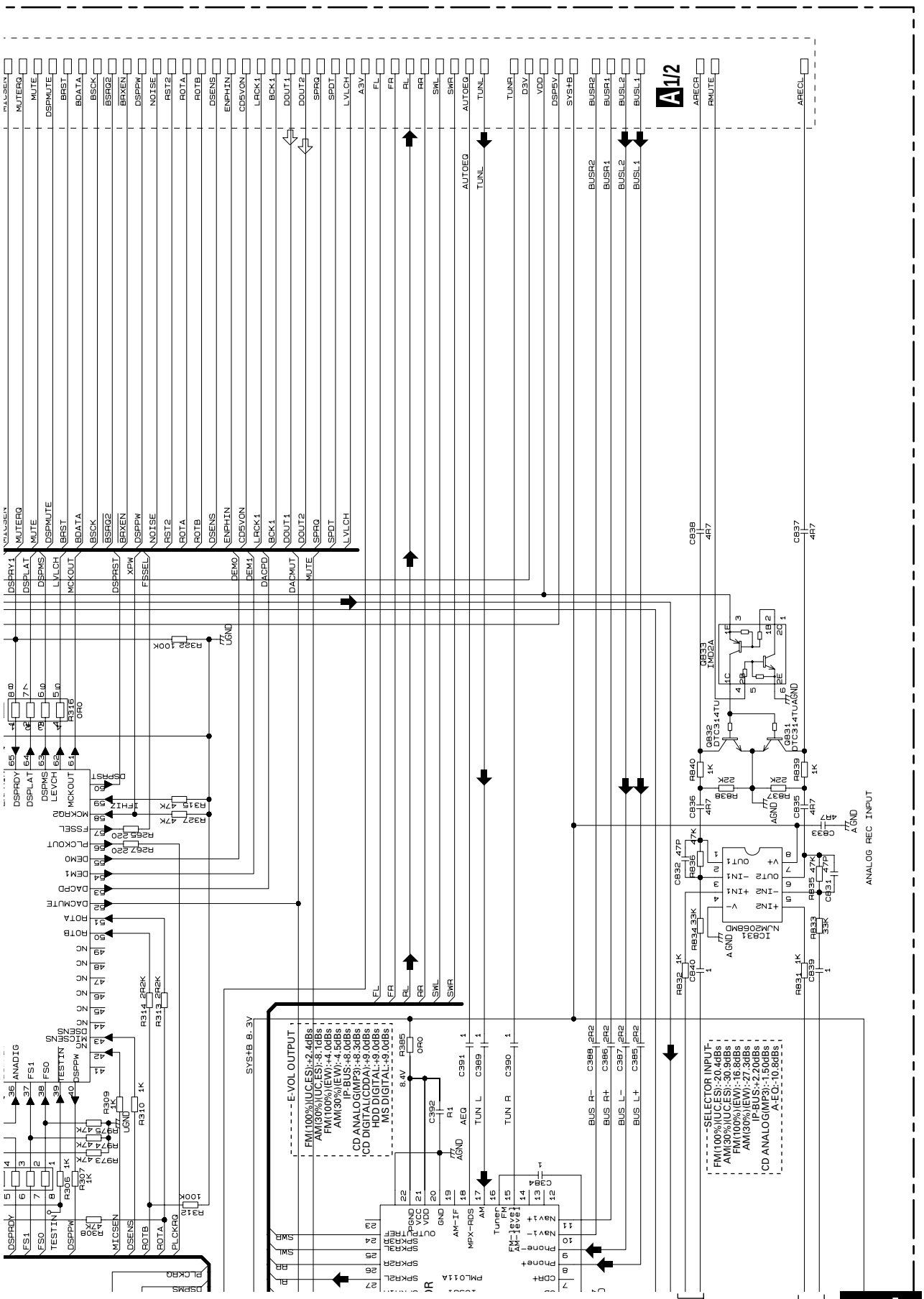
MC-Service


SELECTOR /E-VOL
IC381
PML011A
IC206
TC7WH34FU
IC204
IC202
IC203
NJM2068MD
SELECTOR OUTPUT
FM(100%)(IUC.ES):-16.4dBs
AM(30%)(IUC.ES):-26.9dBs
FM(100%)(EW):-14.8dBs
AM(30%)(EW):-23.3dBs
IP-BUS:-4.80dBs
CD ANALOG(MP3):-4.50dBs
MC-Service

A-a A-b

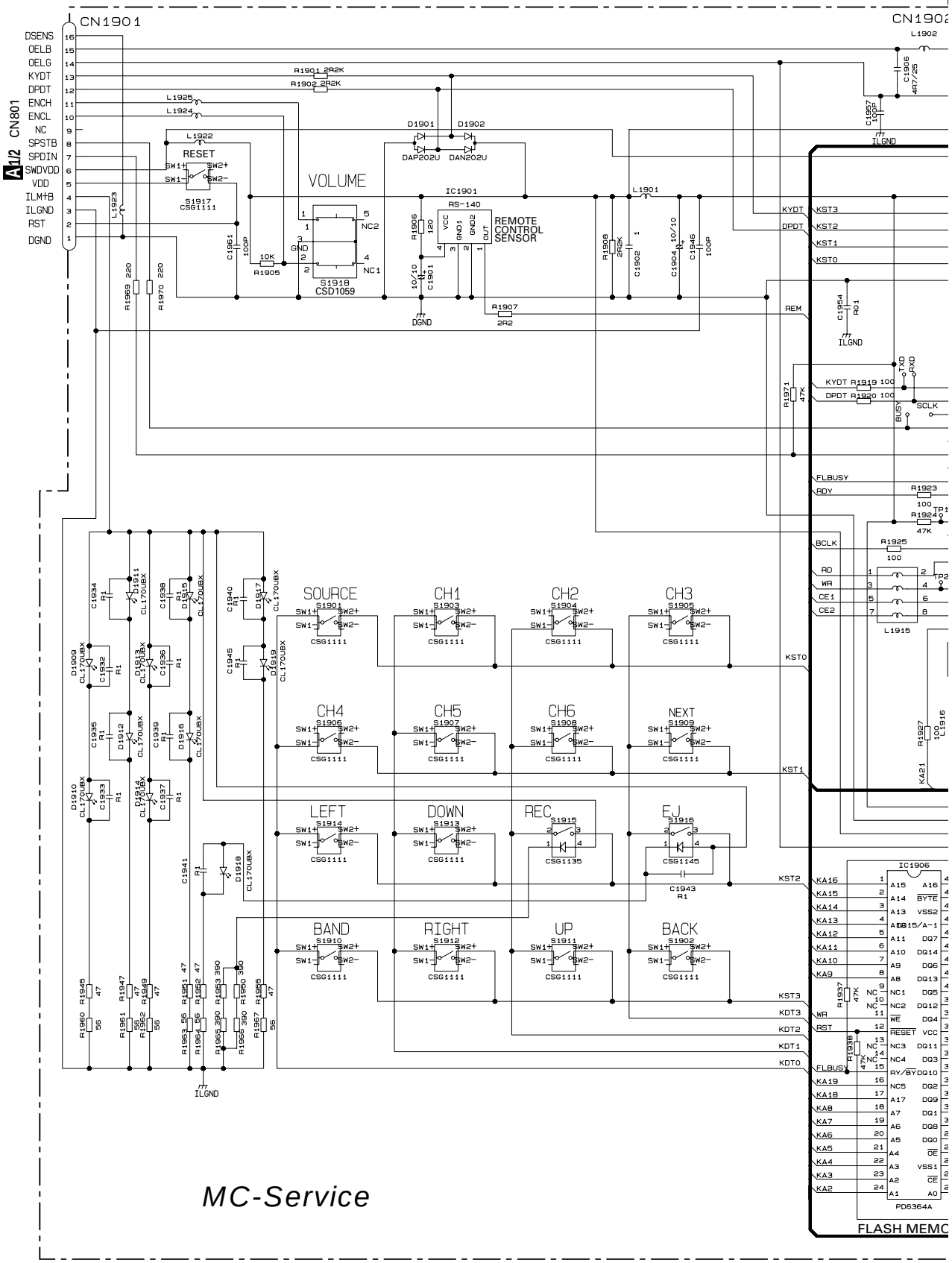


MC-Service



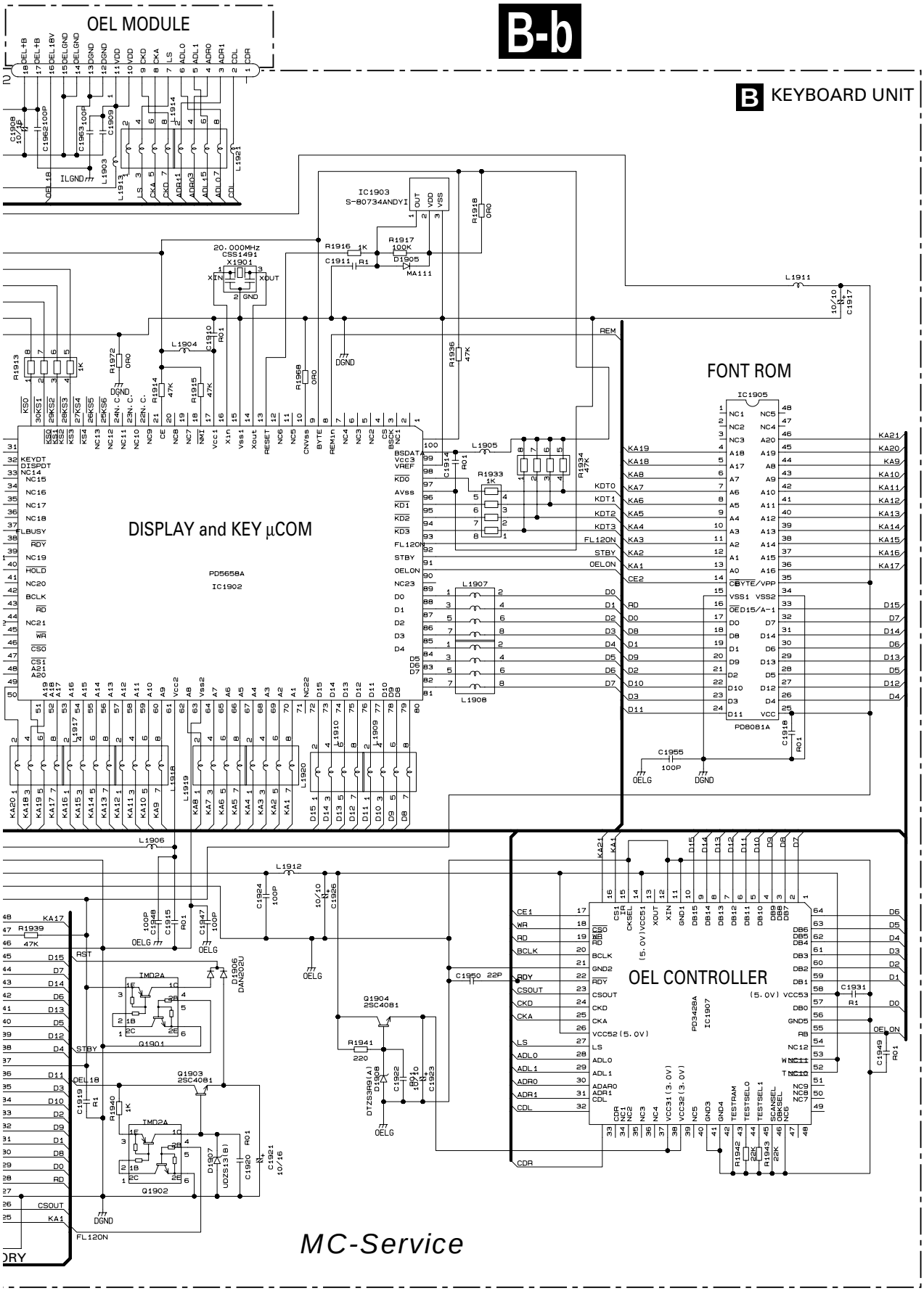
3.4 KEYBOARD UNIT(GUIDE PAGE)

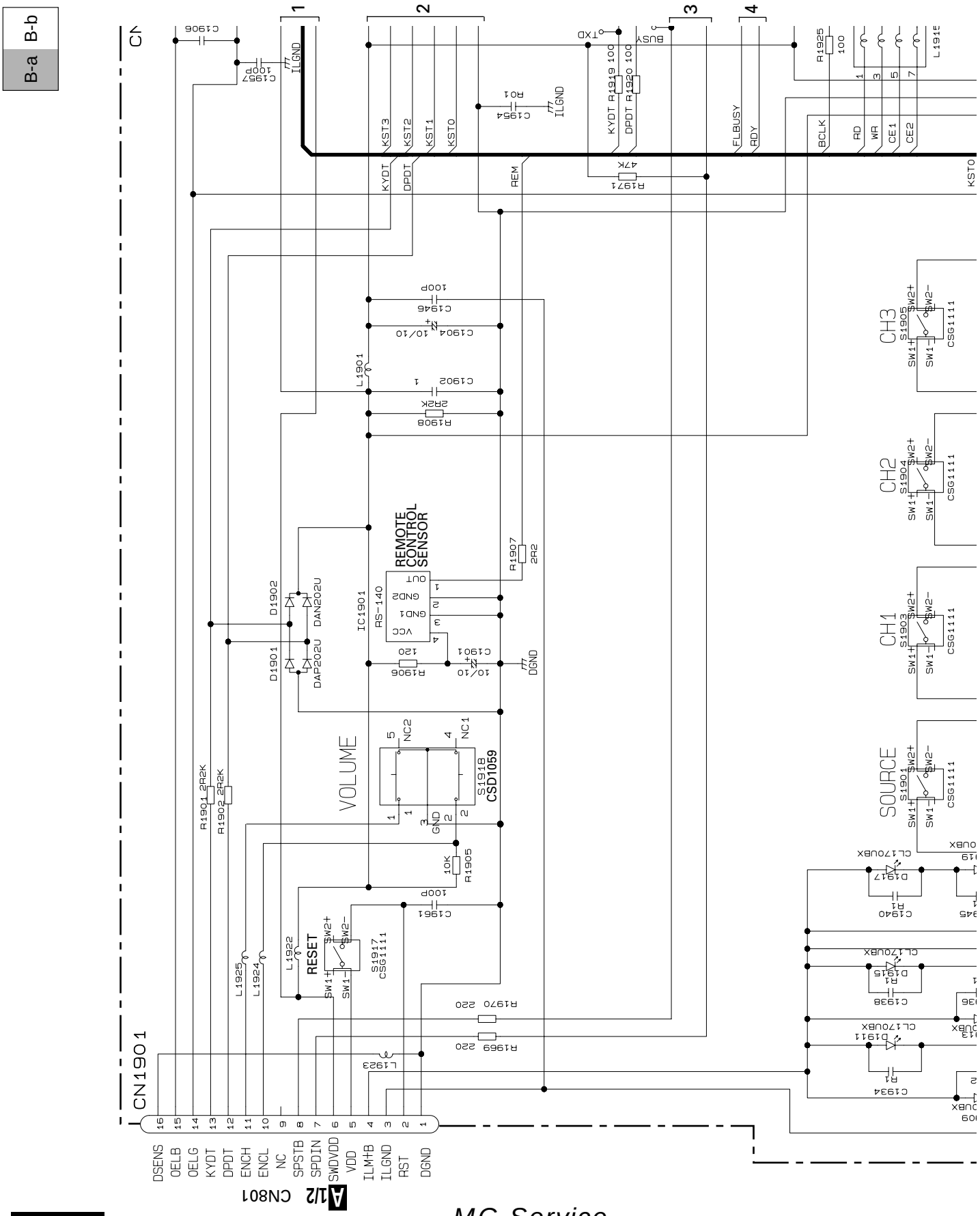
B-a

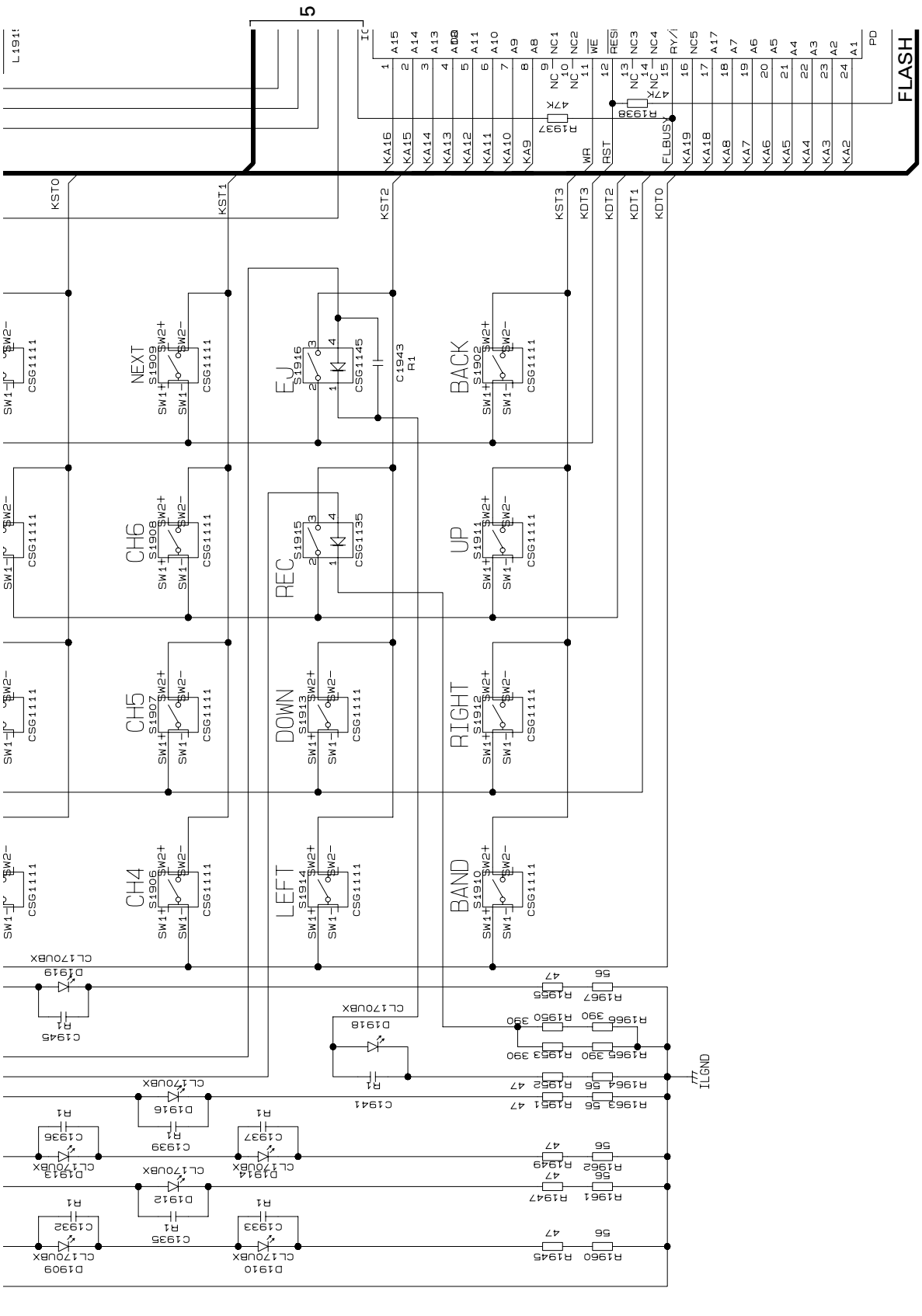


MC-Service

B-b


OEL MODULE
B KEYBOARD UNIT
DISPLAY and KEY µCOM
PD5658A
IC1902
FONT ROM
IC1905
PD8081A
OEL CONTROLLER
PD3428A
IC1907
IC1903
S-80734ANDYI
20.000MHz
CSS1491
X1901
MA111
DANE02U
UDZS13(B)
DTZS3R9(A)
2SC4081
IMD2A
Q1901
Q1902
Q1903
Q1904
MC-Service

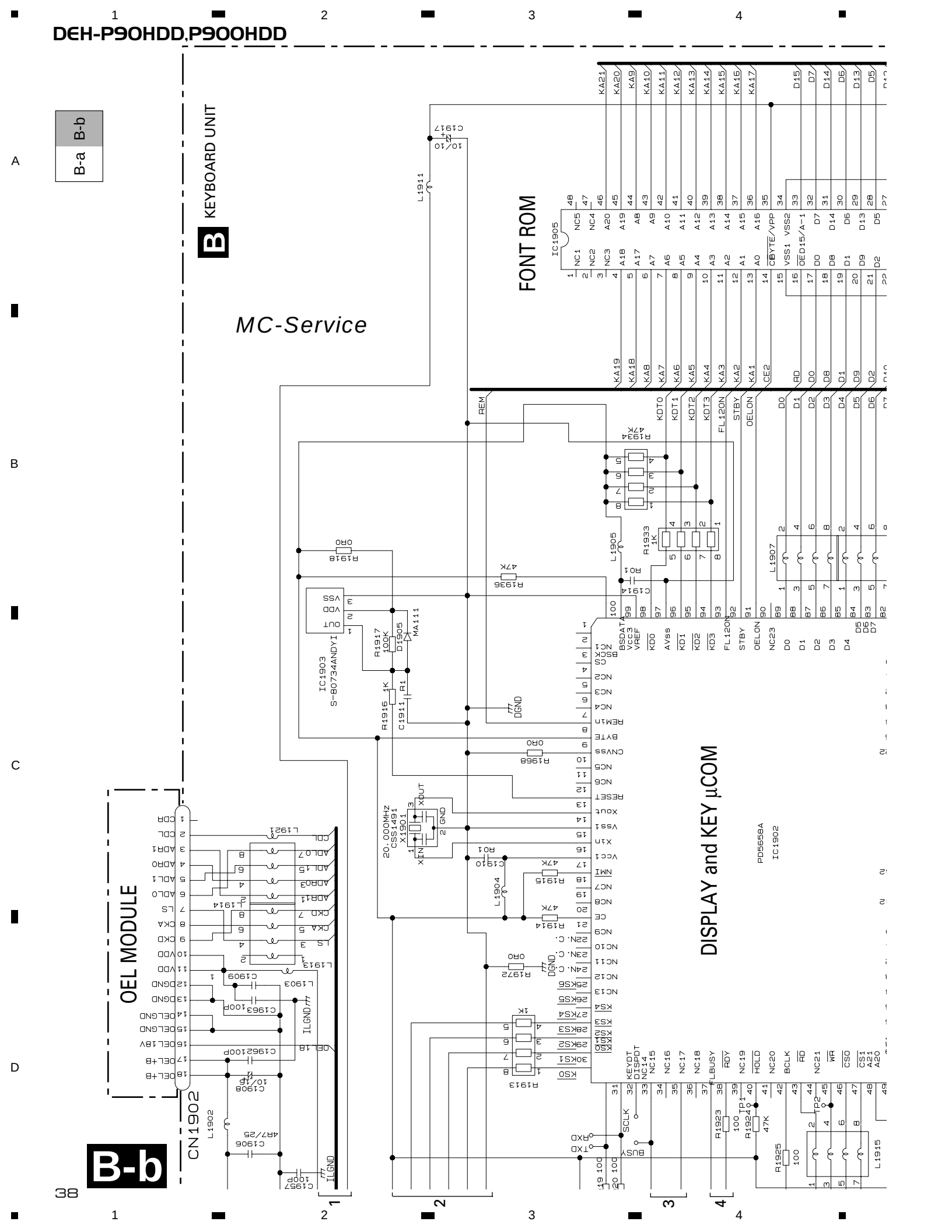

B-a B-b
CN1901
DSENS
OELB
OELG
KYDT
DPDT
ENCH
ENCL
NC
SPSTB
SPDIN
SWDVDD
VDD
ILMHB
ILGND
RST
DGND
A1/2 CN801
REMOTE CONTROL SENSOR
IC1901
RS-140
VOLUME
S1918
CSD1059
RESET
S1917
CSG1111
CH3
CH2
CH1
SOURCE
S1905
S1904
S1903
S1901
SW1+
SW1-
SW2+
SW2-
KST3
KST2
KST1
KST0
KYDT
DPDT
REM
FLBUSY
RDY
BCLK
RD
WR
CE1
CE2
TXD
BUSY
ILGND
DGND
D1901
D1902
DAP202U
DAN202U
R1901 2R2K
R1902 2R2K
R1905 10K
R1906 120
R1907 2R2
R1908 2R2K
R1969 220
R1970 220
R1971 47K
R1919 100
R1920 100
R1925 100
C1906
C1957 100P
C1954
C1945 100P
C1904 10/10
C1902 1
C1901 10/10
C1961 100P
L1901
L1922
L1923
L1924
L1925

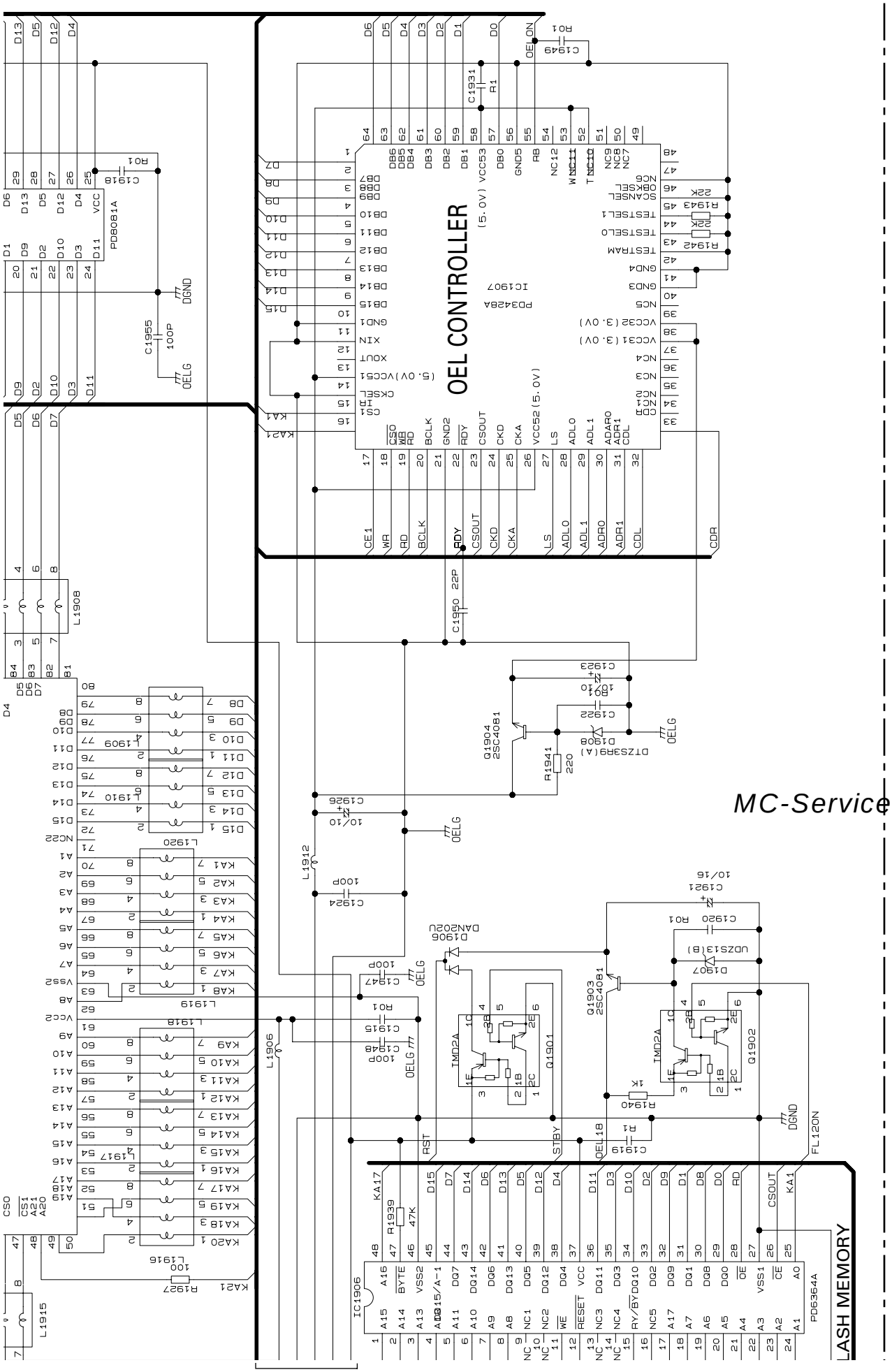


B-a B-b

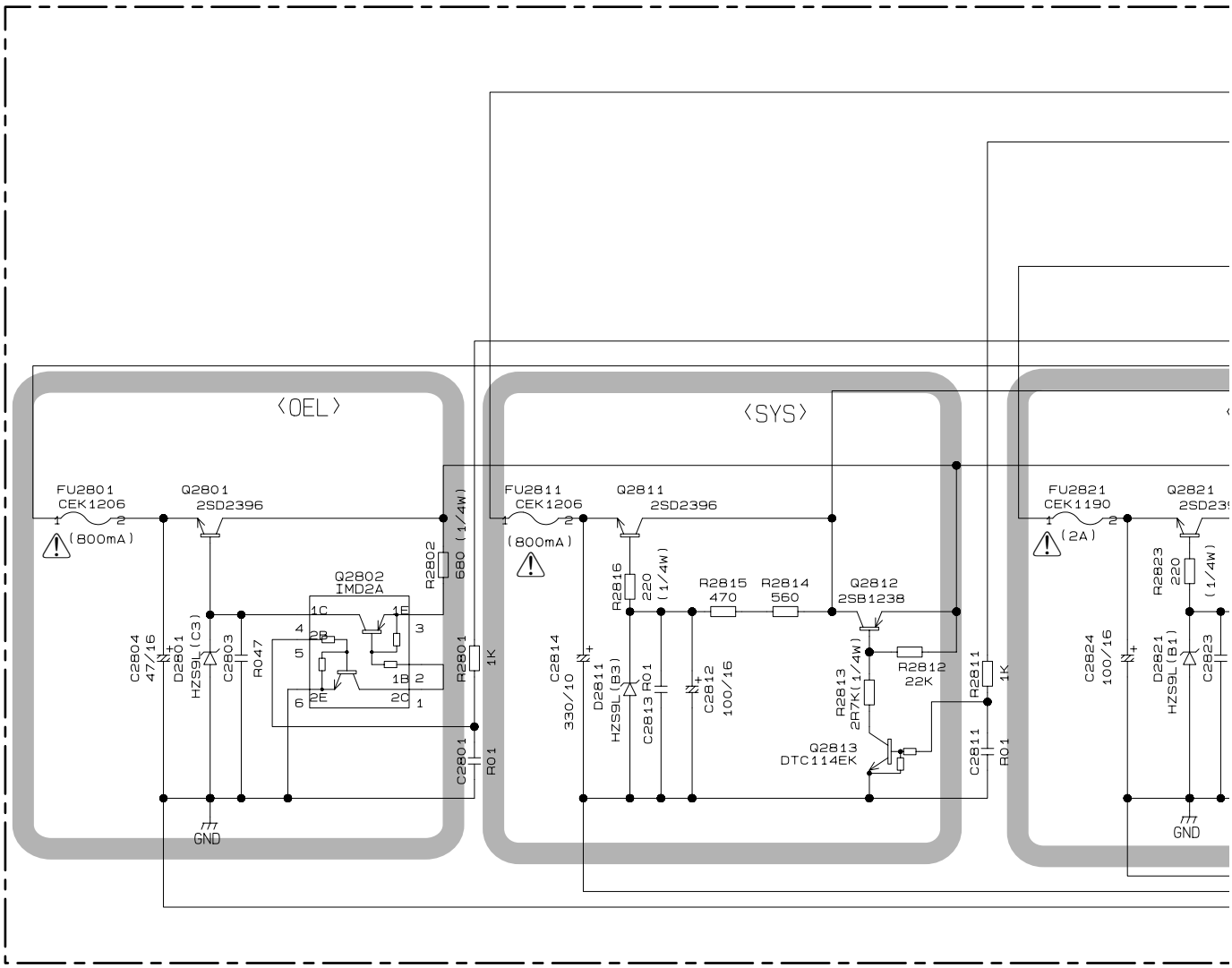
MC-Service

B-a


B-b
B-a
B KEYBOARD UNIT
MC-Service
FONT ROM
DISPLAY and KEY µCOM
PD5658A
IC1902
OEL MODULE
CN1902
IC1905
IC1903
S-80734ANDYI
X1901
20.000MHZ
CSS1491
IC1907
IC1904
L1905
L1907
L1904
L1915
R1933
1K
R1934
47K
R1936
47K
R1918
0R0
R1917
100K
R1916
1K
C1911
1K
D1905
MA111
R1923
100
R1924
47K
R1925
100
TP1
TP2
SCLK
BUSY
TXD
RXD
ILGND
DGND
REM
KDT0
KDT1
KDT2
KDT3
FL12ON
STBY
OELON
B-b


OEL CONTROLLER
IC1907
PD34284
(5.0V)
FLASH MEMORY
IC1906
PD6364A
MC-Service

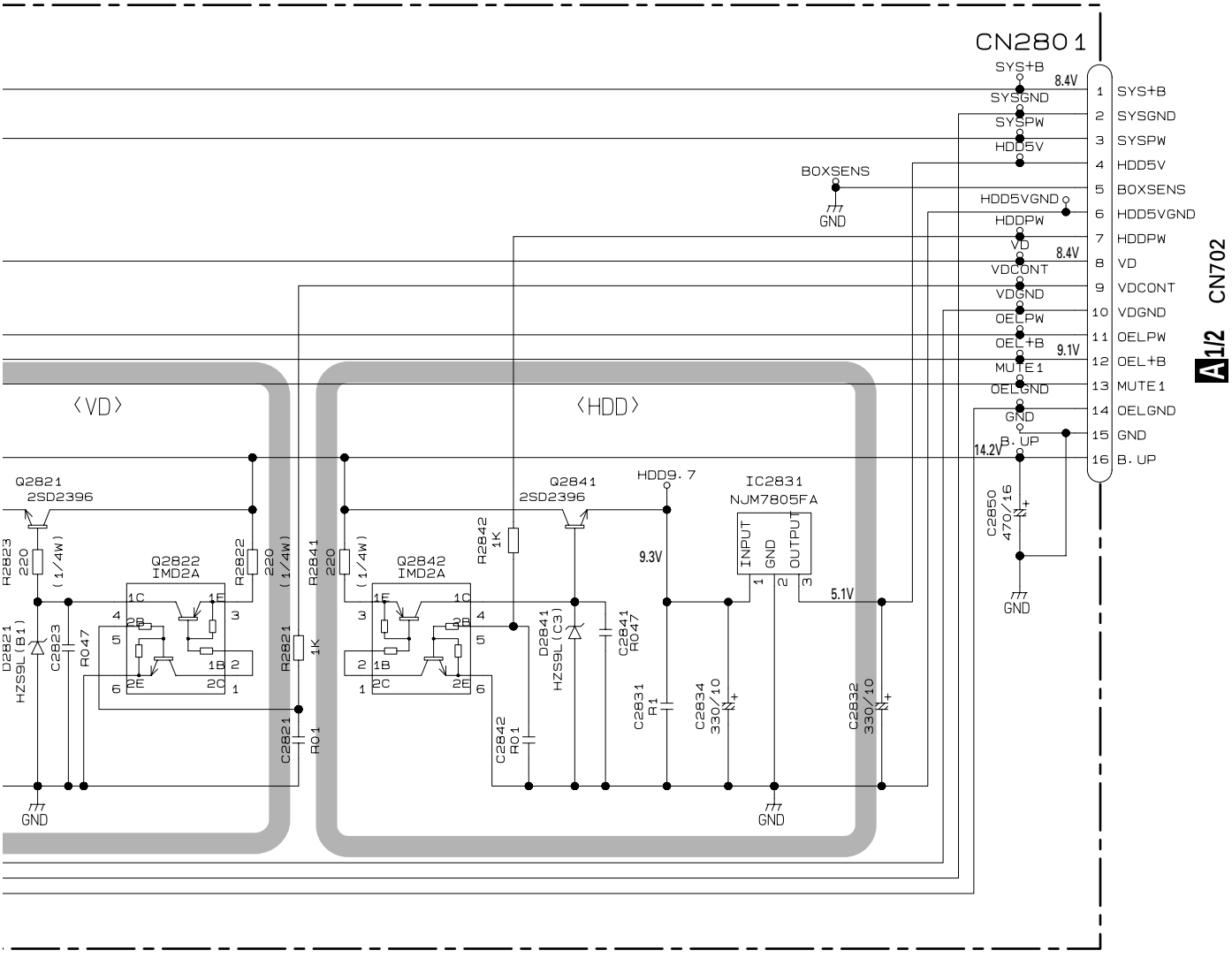
3.5 POWER SUPPLY UNIT



MC-Service

C

C POWER SUPPLY UNIT

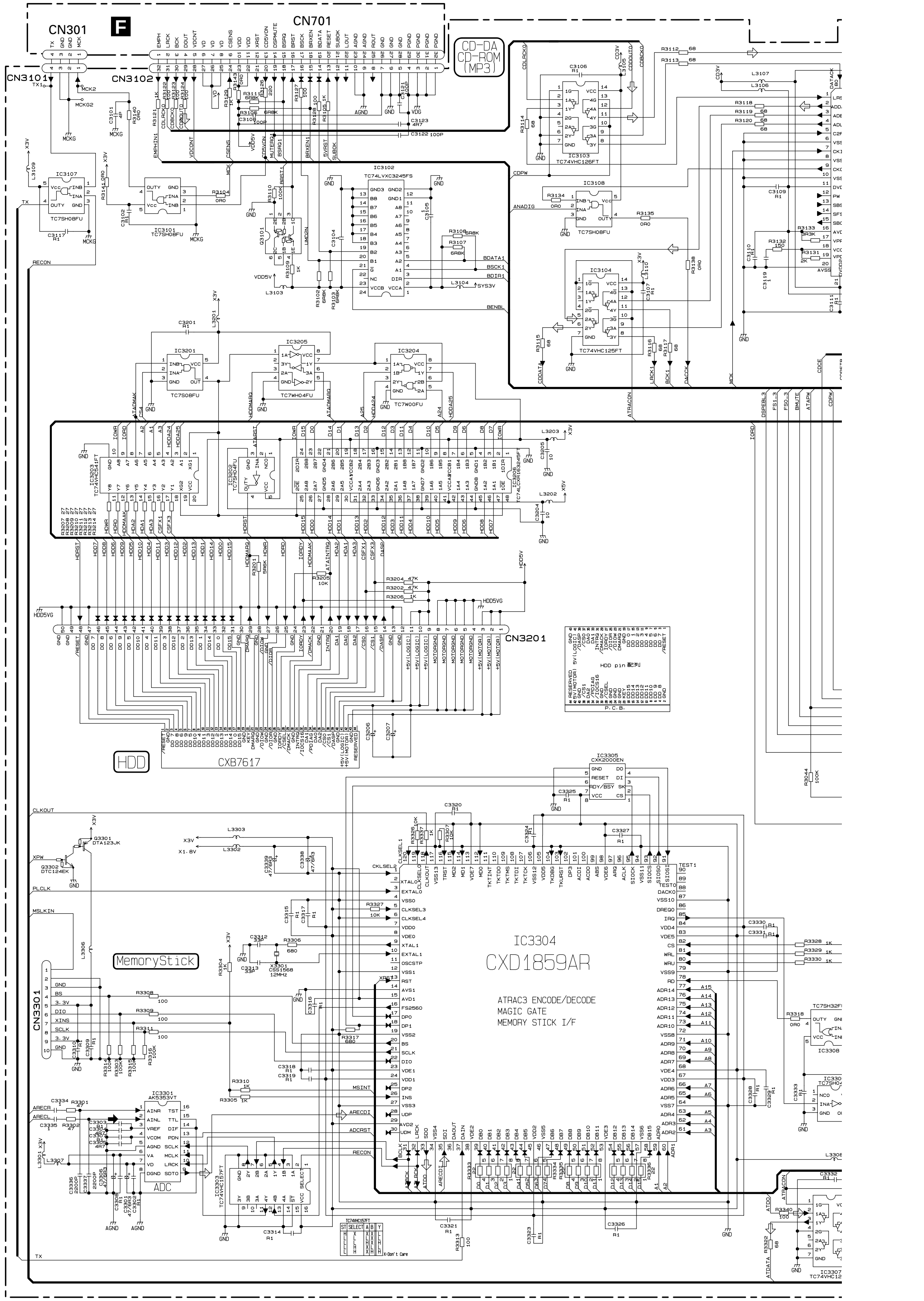


: The power supply is shown with the marked box.

MC-Service

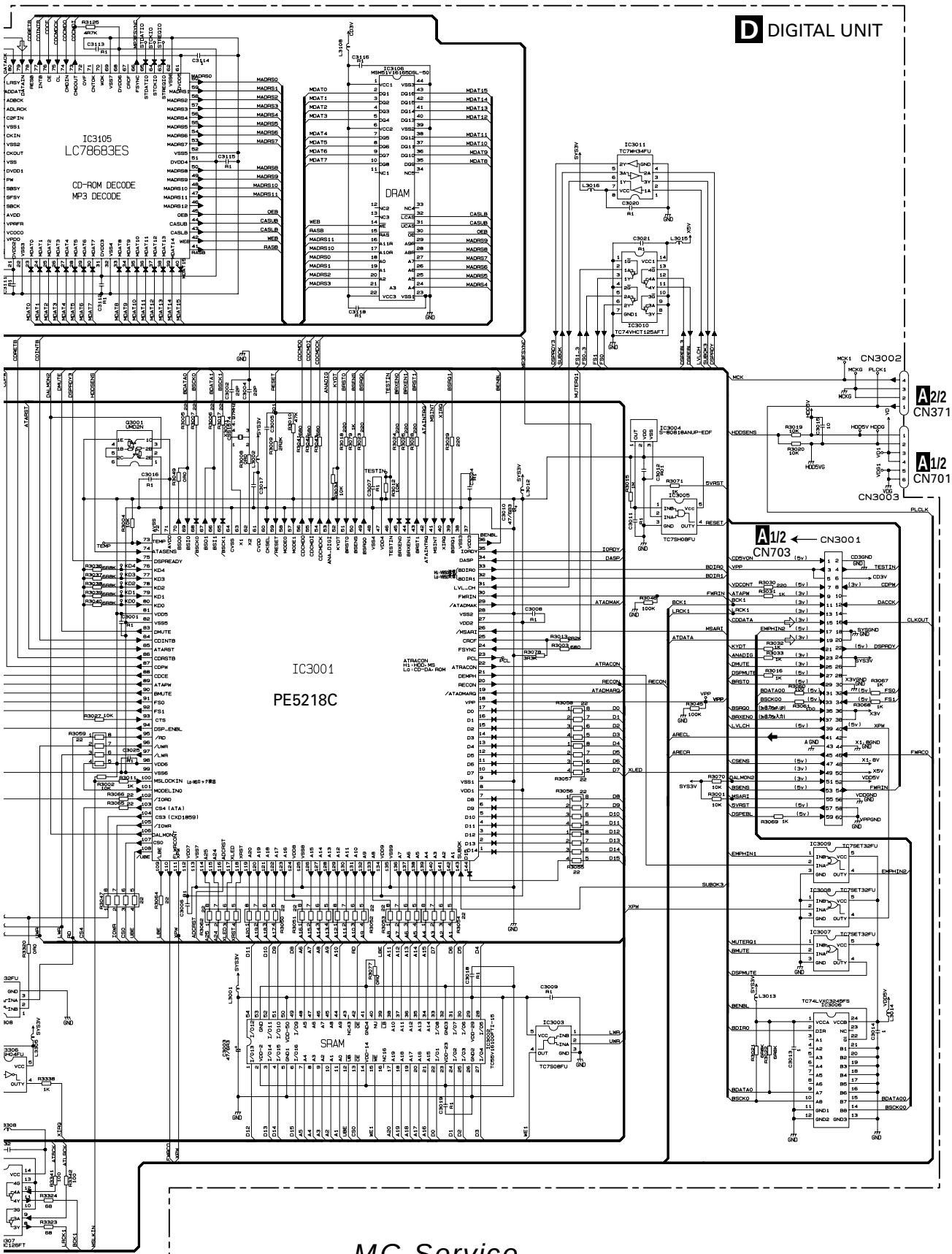
D-a

3.6 DIGITAL UNIT(GUIDE PAGE)

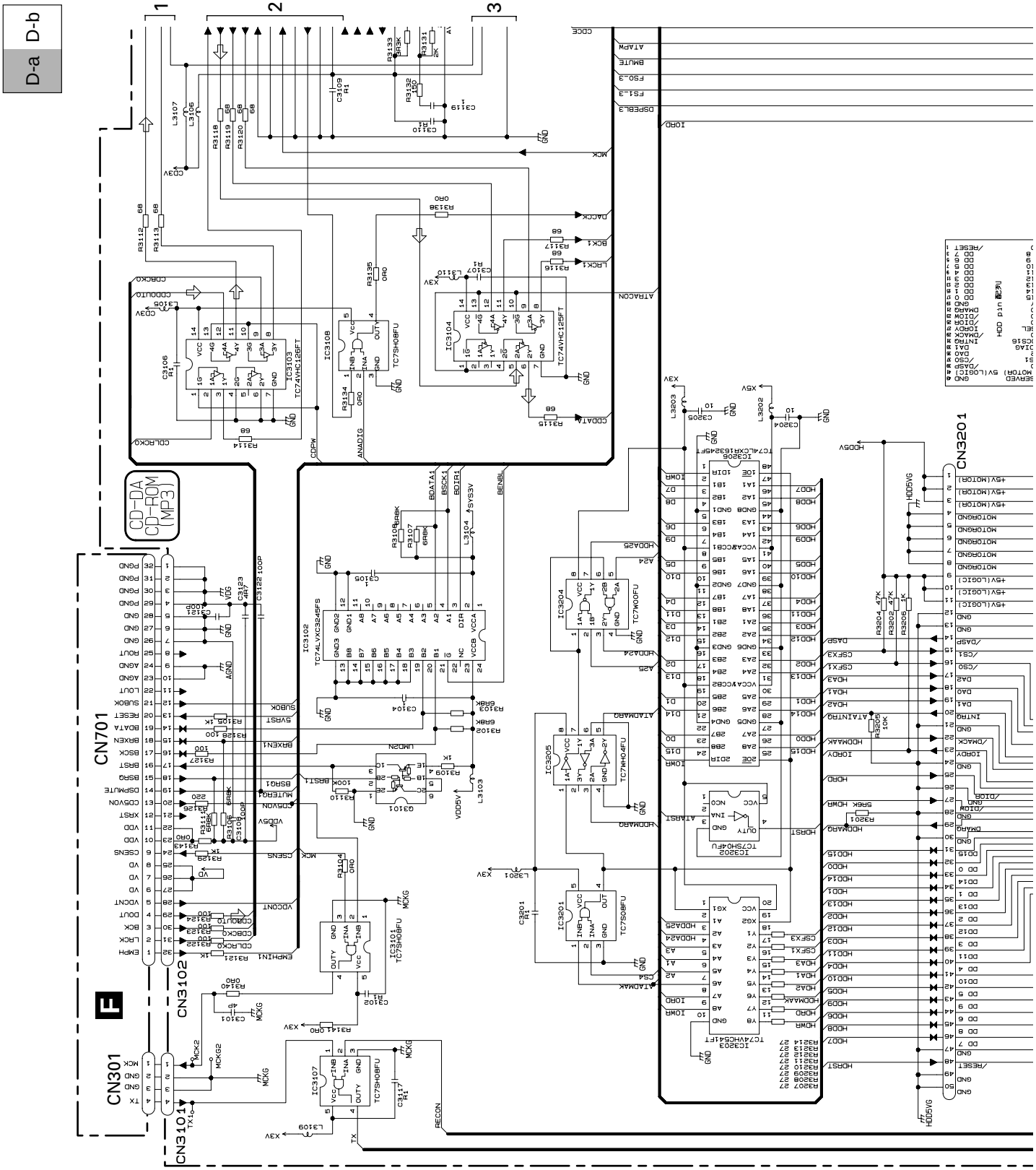

CN301
F
CN701
CN3101
CN3102
CD-DA
CD-ROM
(MP3)
IC3107
TC7SH08FU
IC3101
TC7SH08FU
IC3102
TC74LVXC3245FS
IC3103
TC74VHC126FT
IC3108
TC7SH08FU
IC3104
TC74VHC125FT
IC3201
TC7S08FU
IC3205
TC7WH04FU
IC3204
TC7W00FU
IC3203
TC74VHC541FT
IC3202
TC7SH04FU
IC3206
TC74LCXR163245FT
CN3201
HDD pin 配列
P.C.B.
HDD
CXB7617
IC3305
CXK2000EN
MemoryStick
CN3301
IC3304
CXD1859AR
ATRAC3 ENCODE/DECODE
MAGIC GATE
MEMORY STICK I/F
IC3301
AK5353VT
ADC
IC3303
TC74VHC157FT
X:Don't Care
IC3308
IC3307

MC-Service

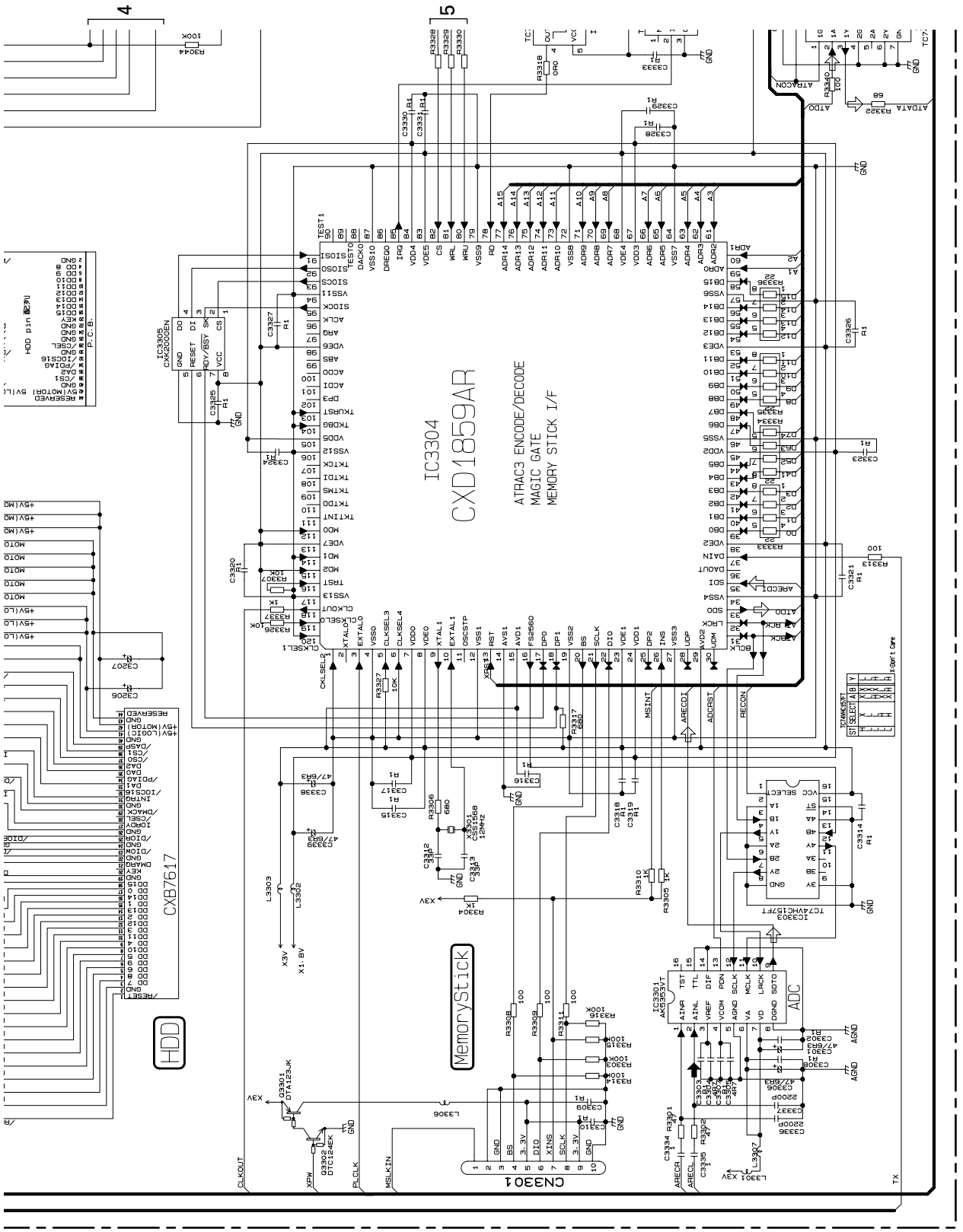
D-b



MC-Service

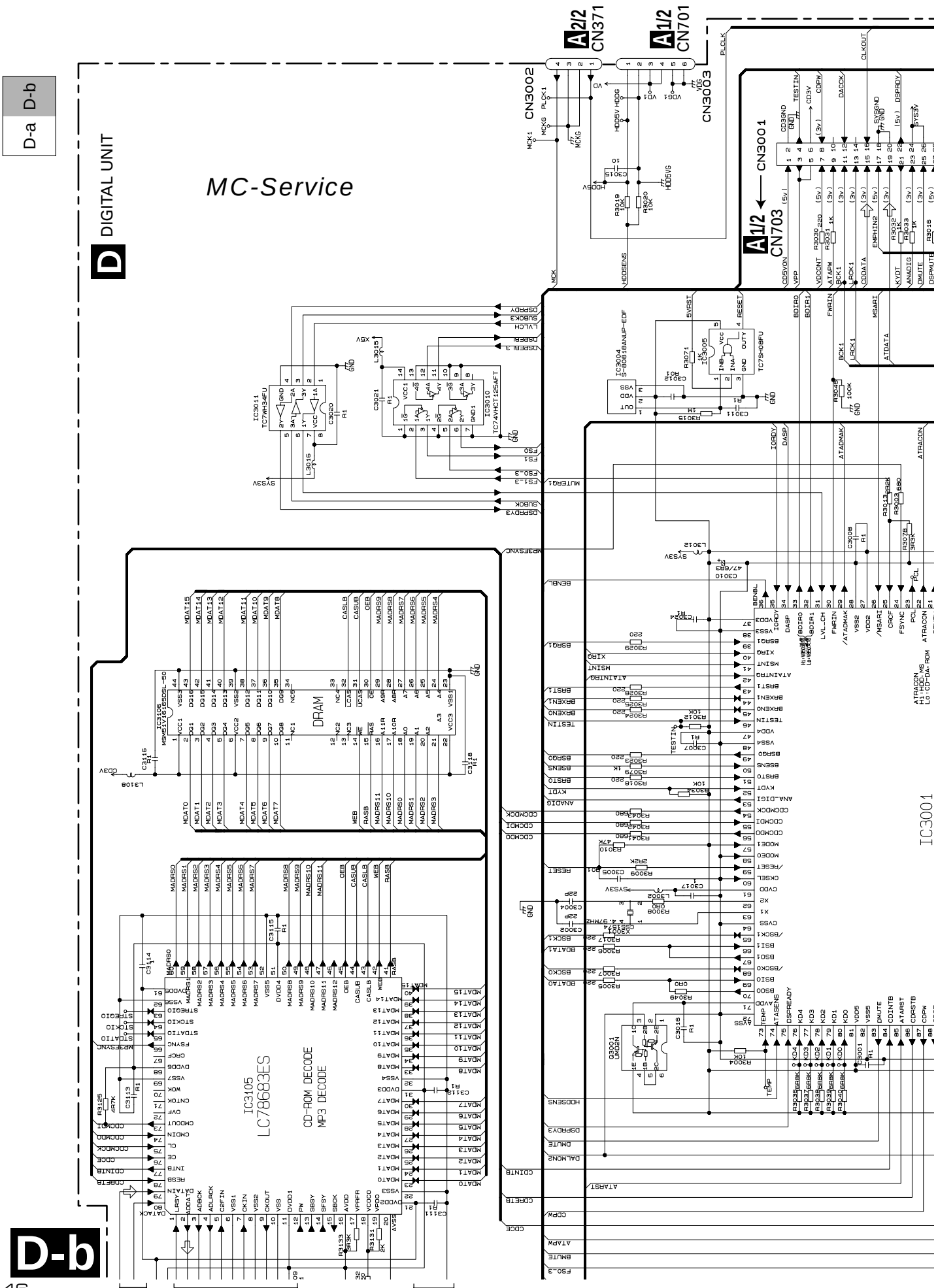


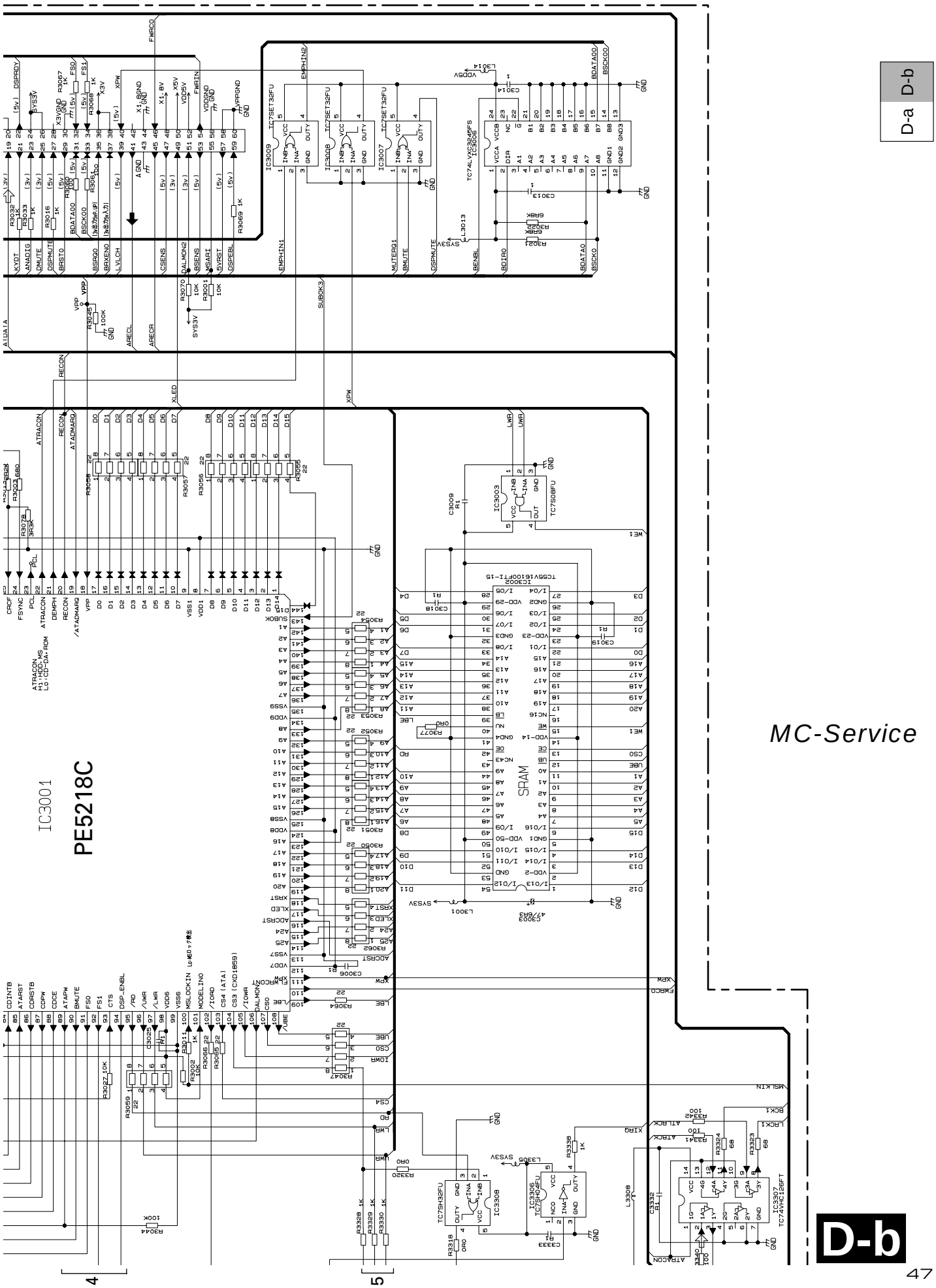
MC-Service



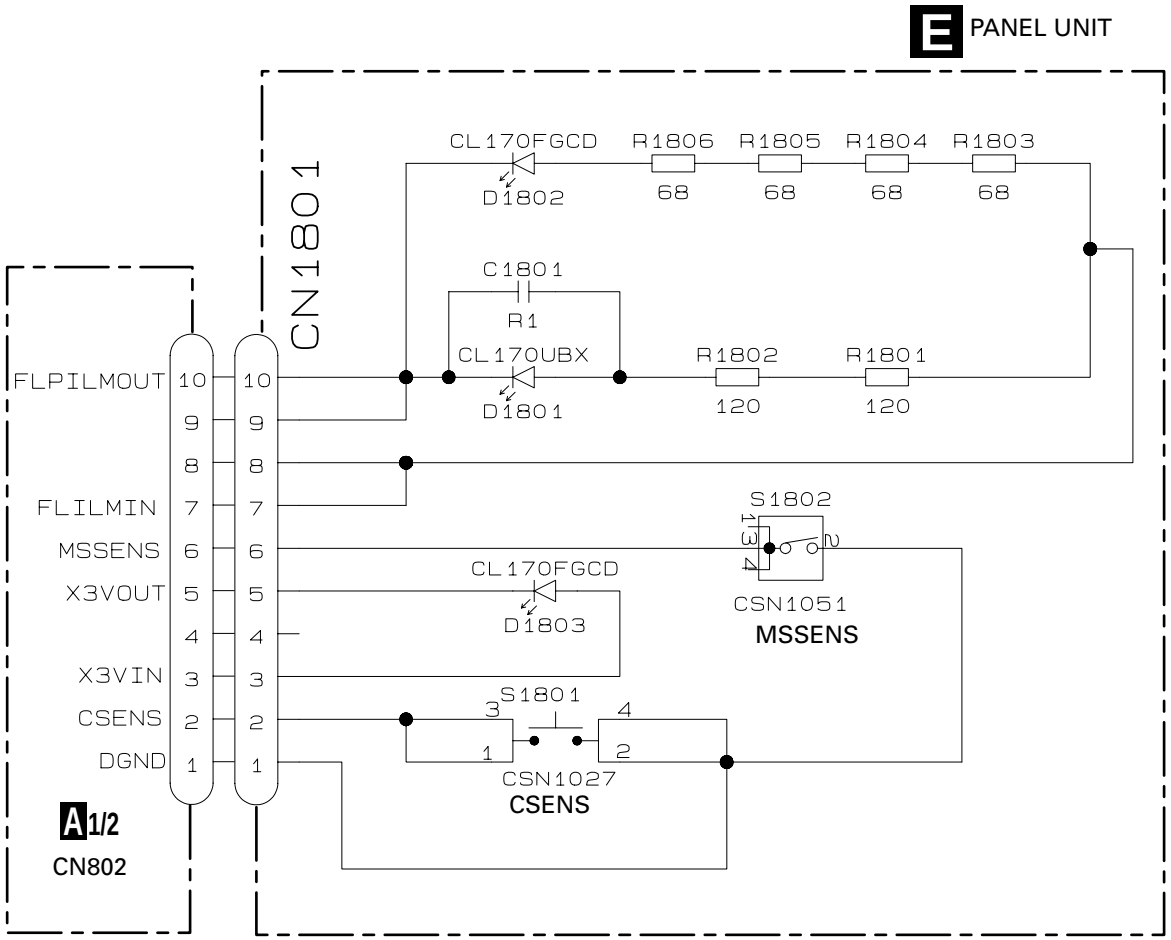
D-a D-b

MC-Service


D-a D-b
D DIGITAL UNIT
MC-Service
A2/2 CN371
A1/2 CN701
CN3002
CN3003
A1/2 CN703
CN3001
IC3001
IC3105
LC78683ES
CD-ROM DECODE
MP3 DECODE
DRAM
D-b


D-a D-b
MC-Service
IC3001
PE5218C
D-b

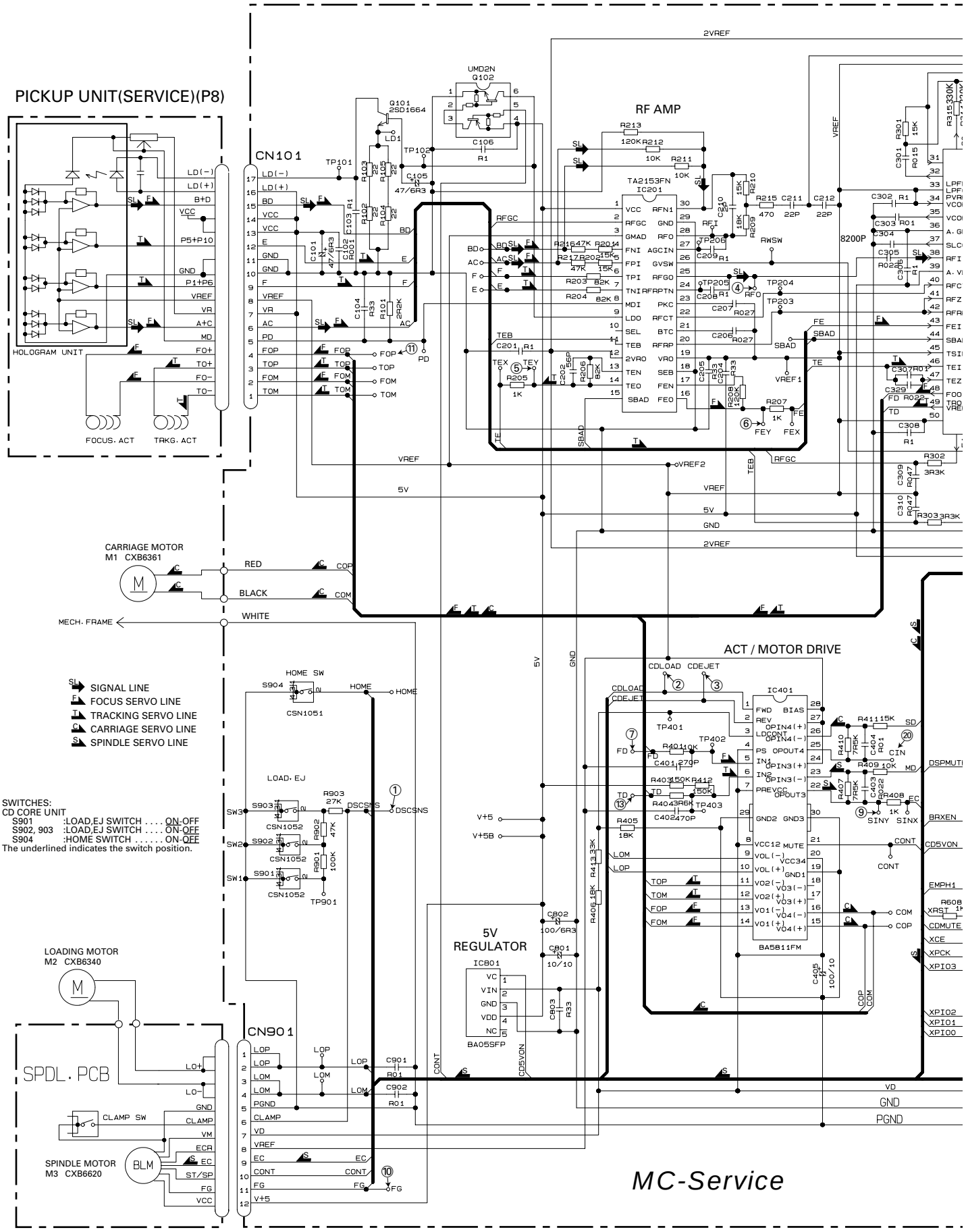
3.7 PANEL UNIT

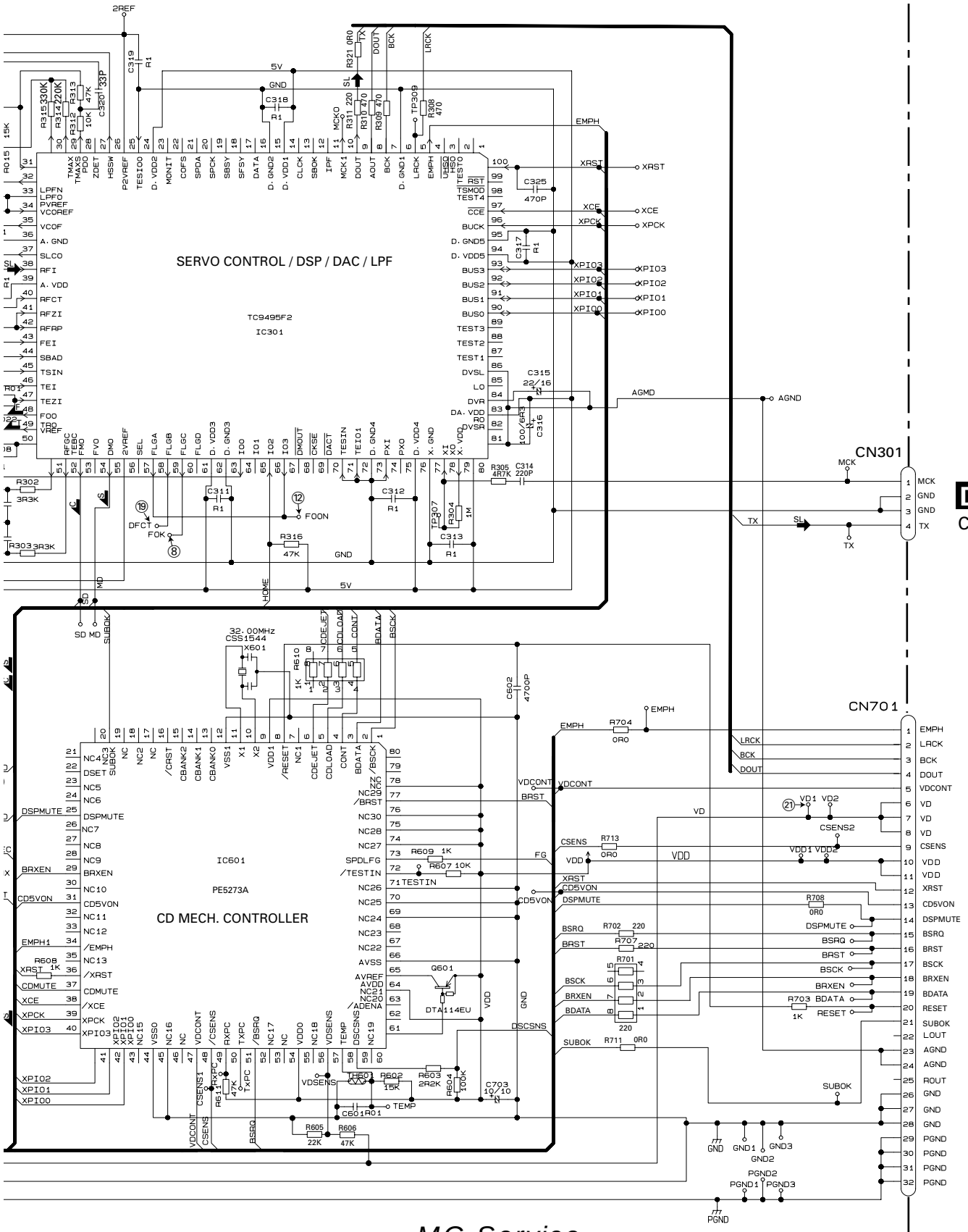


MC-Service

3.8 CD MECHANISM MODULE

F CD CORE UNIT

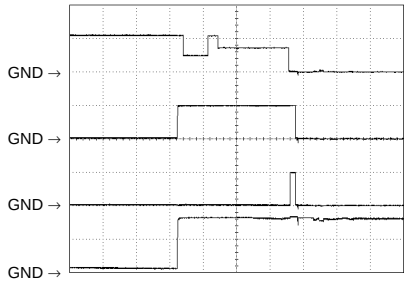



SERVO CONTROL / DSP / DAC / LPF
TC9495F2
IC301
CD MECH. CONTROLLER
IC601
PE5273A
CN301
CN3101
CN701
CN3102
MC-Service

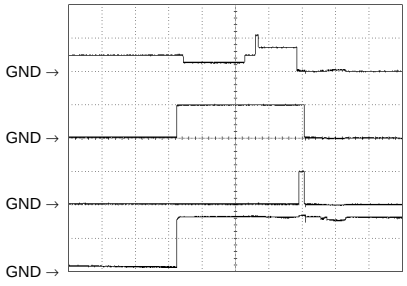
Note:1. The encircled numbers denote measuring pointes in the circuit diagram.
2. Reference voltage
VREF:2.1V

● Waveforms

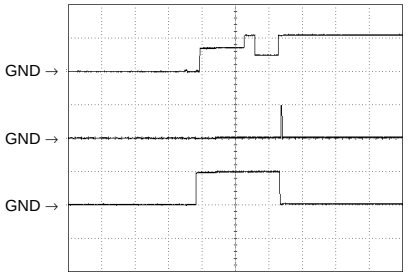
① CH1:DSCSNS 5V/div.
② CH2:CDLOAD 5V/div.
③ CH3:CDEJET 5V/div.
㉑ CH4:VD 5V/div.
500ms/div.
8cm LOAD



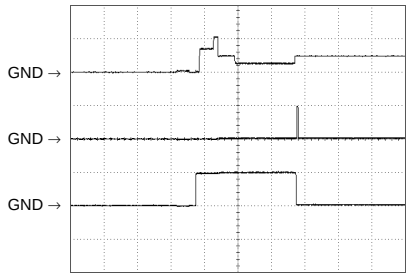
① CH1:DSCSNS 5V/div.
② CH2:CDLOAD 5V/div.
③ CH3:CDEJET 5V/div.
㉑ CH4:VD 5V/div.
500ms/div.
12cm LOAD



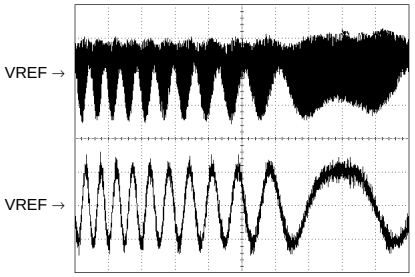
① CH1:DSCSNS 5V/div.
② CH2:CDLOAD 5V/div.
③ CH3:CDEJET 5V/div.
500ms/div.
8cm EJECT



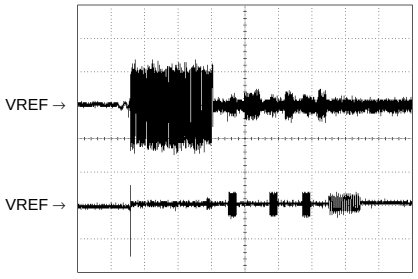
① CH1:DSCSNS 5V/div.
② CH2:CDLOAD 5V/div.
③ CH3:CDEJET 5V/div.
500ms/div.
12cm EJECT



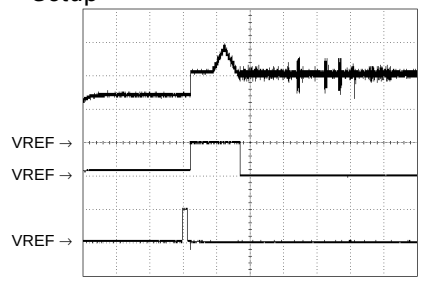
④ CH1:RFO 500mV/div.
⑤ CH2:TEY 500mV/div.
2ms/div.
Tracking open



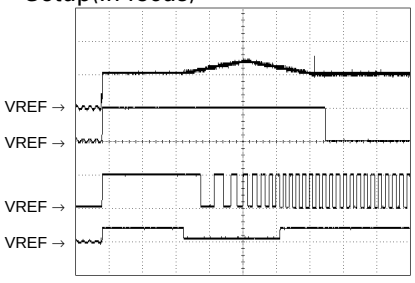
⑤ CH1:TEY 500mV/div.
⑥ CH2:FEY 500mV/div.
200ms/div.
Setup



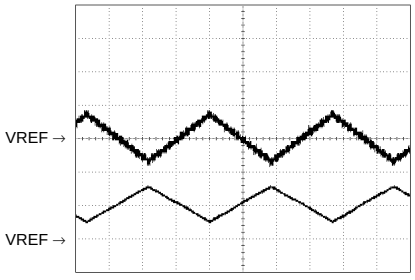
⑦ CH1:FD 1V/div.
⑧ CH2:$\overline{\text{FOK}}$ 5V/div.
⑨ CH3:SINY 5V/div.
500ms/div.
Setup



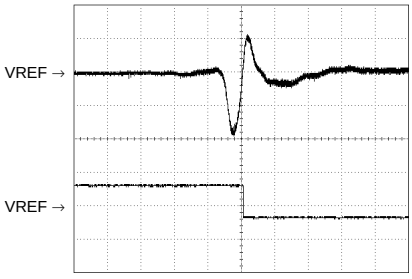
⑦ CH1:FD 2V/div.
⑧ CH2:$\overline{\text{FOK}}$ 5V/div.
⑩ CH3:FG 5V/div.
⑨ CH4:SINY 5V/div.
100ms/div.
Setup(In focus)



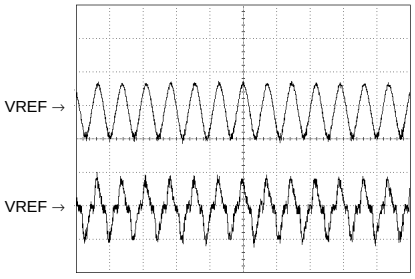
⑦ CH1:FD 1V/div.
⑪ CH2:FOP 2V/div.
200ms/div.
Setup(In focus)



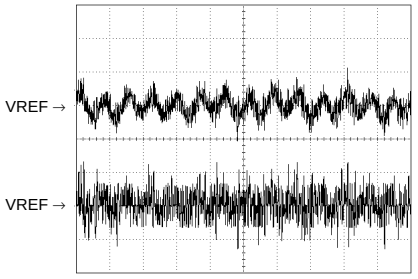
⑥ CH1:FEY 500mV/div.
⑫ CH2:$\overline{\text{FOON}}$ 5V/div.
1ms/div.
Setup(Focus close)



⑥ CH1:FEY 200mV/div.
⑦ CH2:FD 500mV/div.
1ms/div.
Setup(Focus AGC)

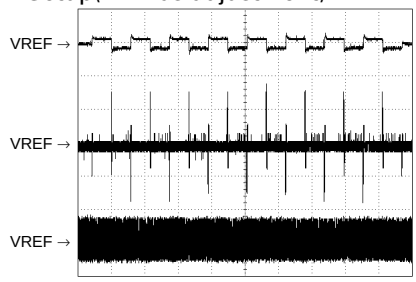


⑤ CH1:TEY 200mV/div.
⑬ CH2:TD 200mV/div.
1ms/div.
Setup(Tracking AGC)



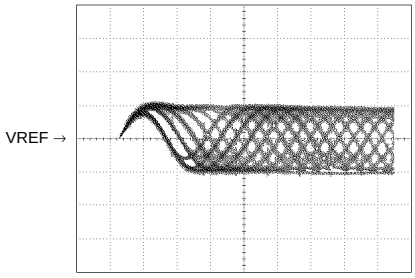
⑥ CH1:FEY 500mV/div.
⑦ CH2:FD 500mV/div. 10ms/div.
④ CH3:RFO 1V/div.

Setup(FE Bias adjustment)



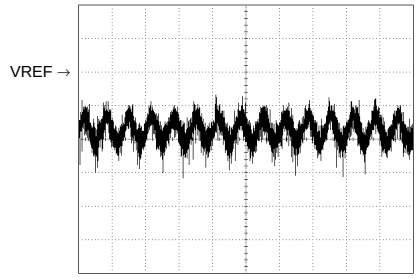
④ CH1:RFO 0.5V/div. 0.5µs/div.

Play



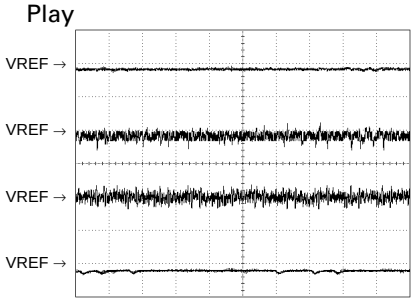
⑨ CH1:SINY 100mV/div. 200ms/div.

Play



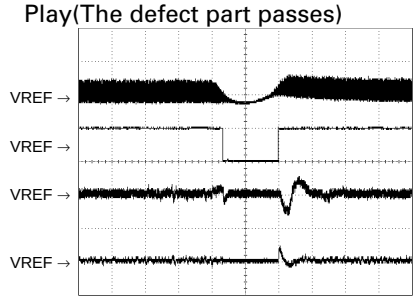
⑥ CH1:FEY 500mV/div.
⑦ CH2:FD 500mV/div.
⑤ CH3:TEY 500mV/div. 1ms/div.
⑬ CH4:TD 500mV/div.

Play



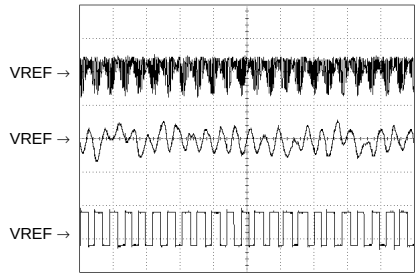
④ CH1:RFO 2V/div.
⑲ CH2:$\overline{\text{DFCT}}$ 5V/div.
⑦ CH3:FD 1V/div. 500µs/div.
⑬ CH4:TD 2V/div.

Play(The defect part passes)



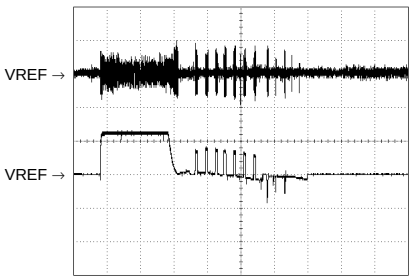
④ CH1:RFO 1V/div.
⑤ CH2:TEY 500mV/div. 50µs/div.
⑲ CH3:$\overline{\text{DFCT}}$ 5V/div.

CRG move



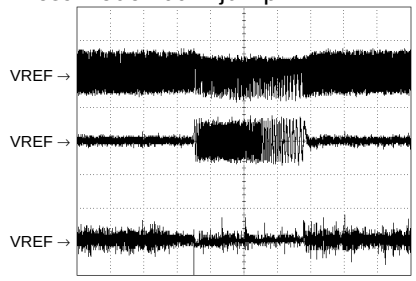
⑤ CH1:TEY 500mV/div. 200ms/div.
⑳ CH2:CIN 500mV/div.

Search



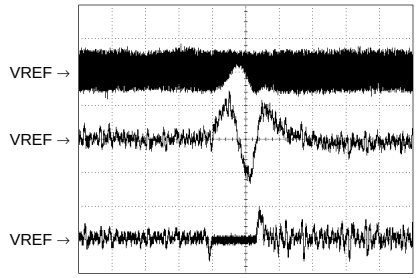
④ CH1:RFO 1V/div.
⑤ CH2:TEY 1V/div. 5ms/div.
⑬ CH3:TD 1V/div.

Test mode 100TRjump



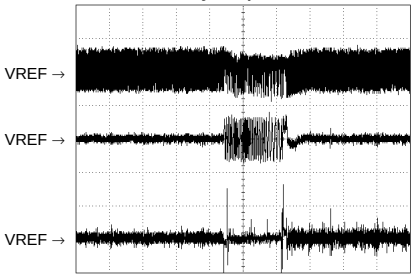
④ CH1:RFO 1V/div.
⑤ CH2:TEY 500mV/div. 500µs/div.
⑬ CH3:TD 1V/div.

Test mode 1TRjump



④ CH1:RFO 1V/div.
⑤ CH2:TEY 1V/div. 5ms/div.
⑬ CH3:TD 1V/div.

Test mode 32TRjump

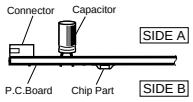


4. PCB CONNECTION DIAGRAM

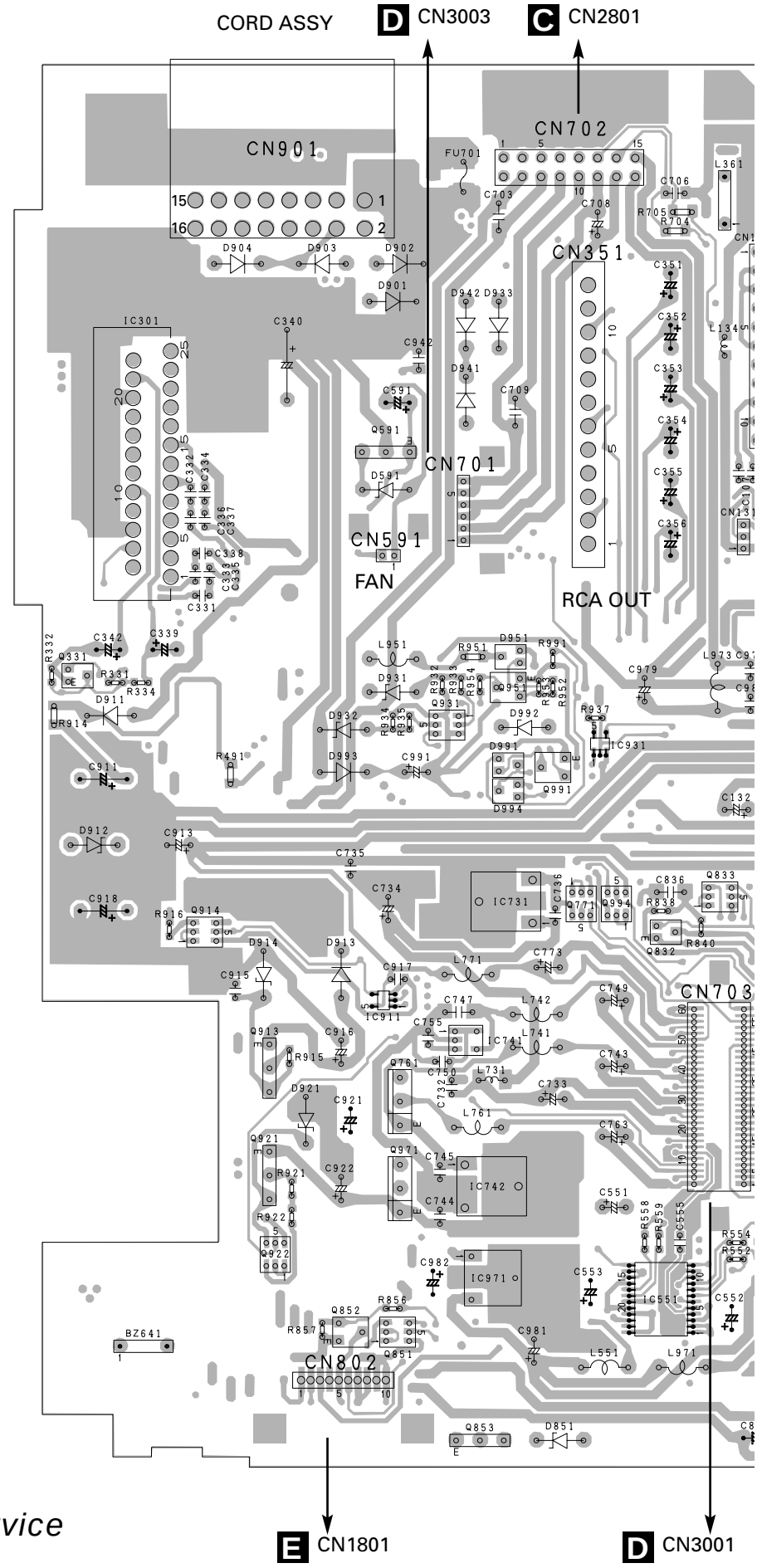
4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

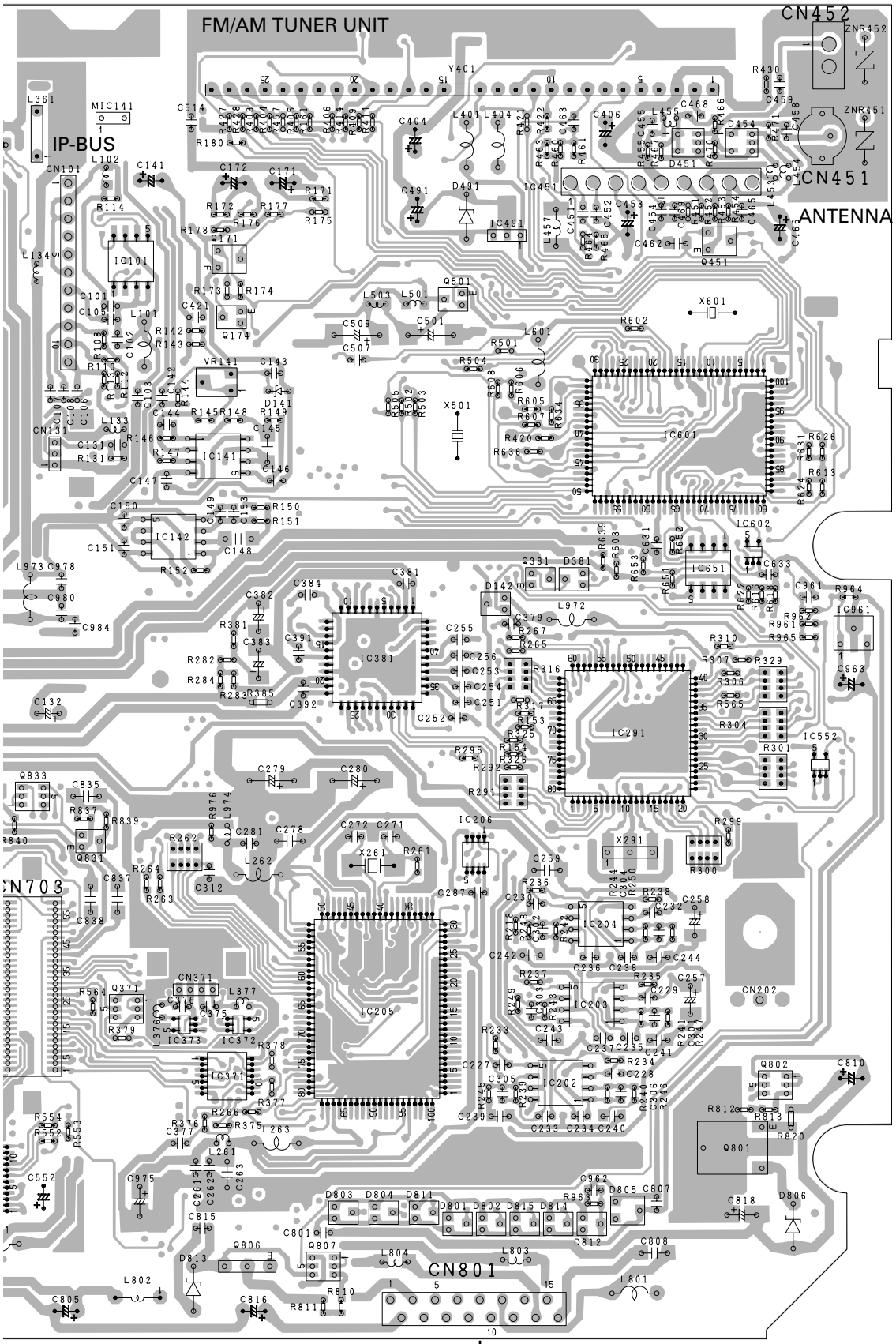
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



A TUNER AMP UNIT



MC-Service



IC,Q

A

IC451

IC491

Q171 IC301

IC101 Q451

Q501

Q174

Q591

IC601

IC141

B

IC602

IC142

Q381 Q331 IC651

Q951

IC961 Q931

IC931

IC381

Q991

IC291 IC552

Q833

IC731 Q994 Q771

Q914 IC206

Q831 Q832

C

IC911

IC204 Q913 IC741

Q761

Q371

IC203 IC205

Q921 Q971

IC373 IC372

Q802 IC742 IC371 IC202

Q922

Q801 IC971

IC551

Q852

Q851

Q806 Q807

D

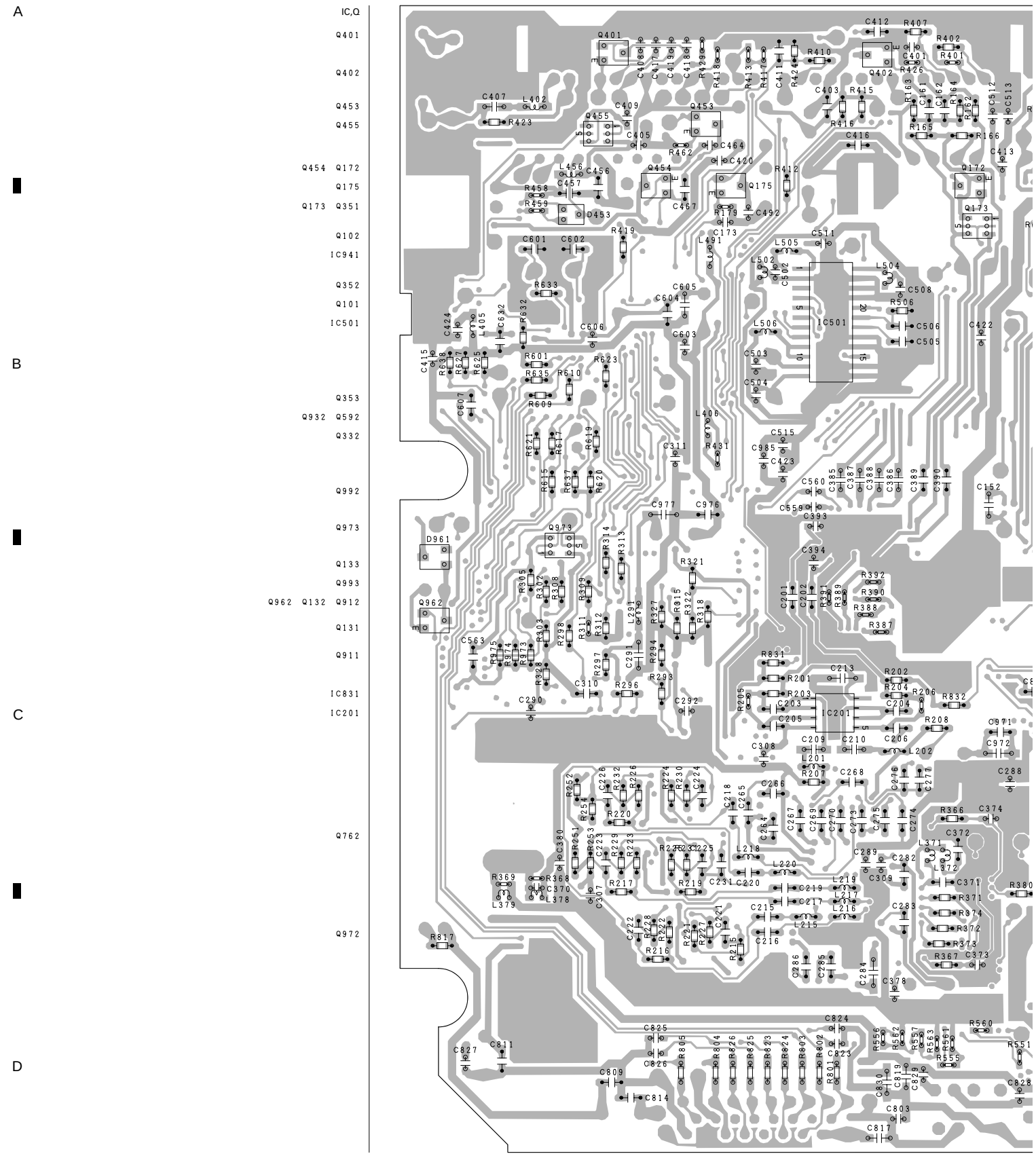
Q853

MC-Service

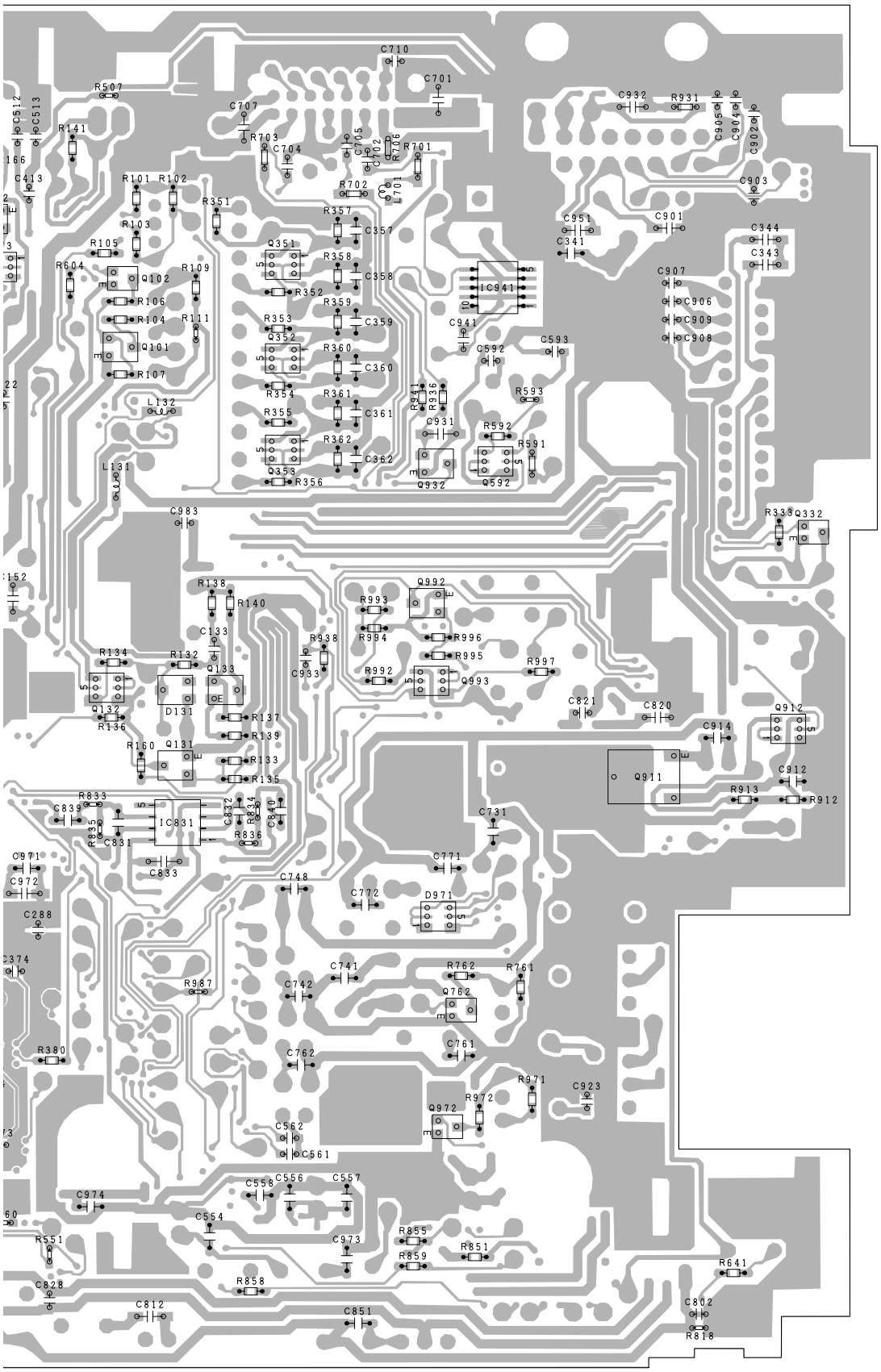
B CN1901

FRONT

A TUNER AMP UNIT

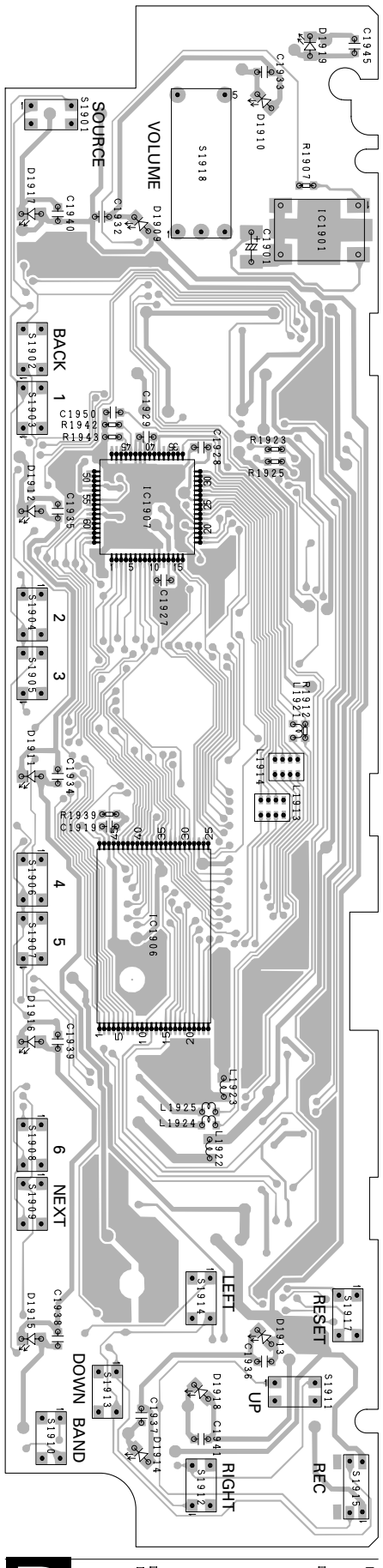


SIDE B

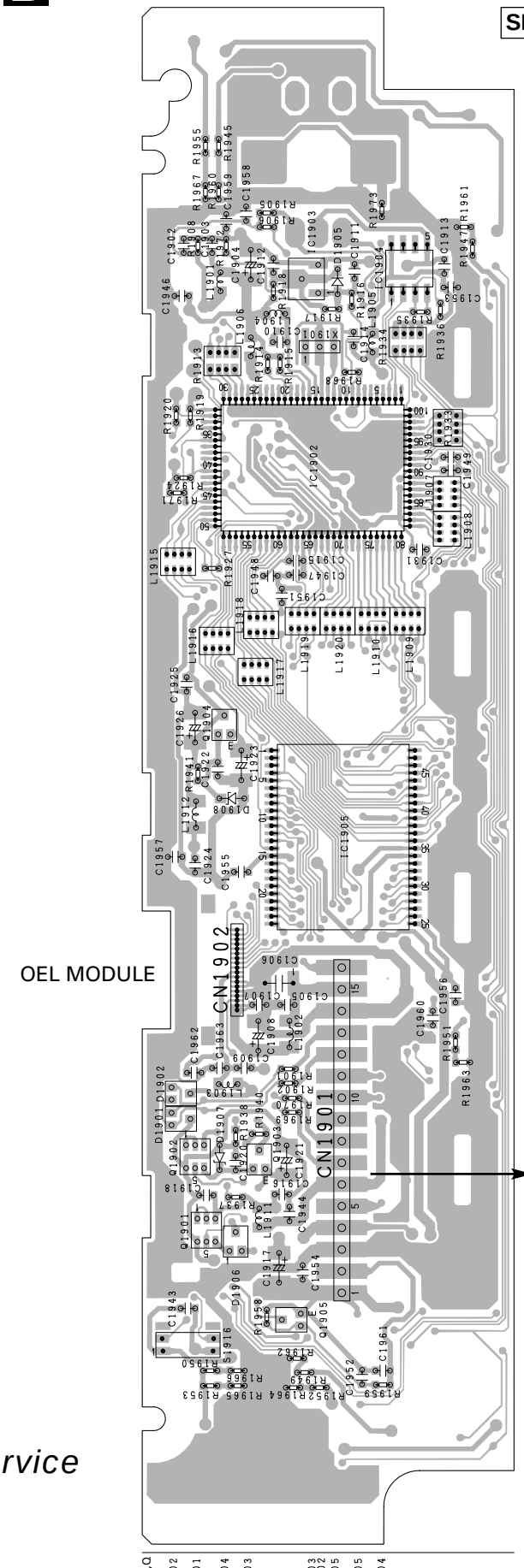

C710
C701
R507
C707
R703
C704
C705
C702
R706
R701
C932
R931
C905
C904
C902
R141
C512
C513
C413
R101
R102
R351
R702
C903
R357
C357
C951
C901
C344
R103
C341
C343
R105
Q351
R358
C358
C907
R604
Q102
R109
R352
IC941
R106
R359
C359
C906
R104
R111
R353
C941
C909
Q352
C592
C593
R360
C360
C908
Q101
R107
R354
R361
C361
R593
L132
R355
R941
R936
C931
R592
R362
C362
R591
L131
Q353
R356
Q932
Q592
C983
R333
Q332
R138
R140
Q992
R993
R994
R996
C133
R938
R995
R134
R132
C933
R992
Q993
R997
Q133
D131
C821
C820
Q912
R137
Q132
R136
C914
R160
Q131
R139
Q911
R133
C912
R135
R913
R912
R833
C839
IC831
C832
R834
C840
R835
C831
R836
C731
C971
C771
C833
C748
C772
D971
C972
C288
C374
C741
R762
R761
R987
C742
Q762
C761
R380
C762
R971
C923
R972
Q972
C562
C561
C556
C557
C558
C974
C554
R855
R551
C973
R859
R851
R641
C828
R858
C812
C802
C851
R818

4.2 KEYBOARD UNIT

B KEYBOARD UNIT



B KEYBOARD UNIT

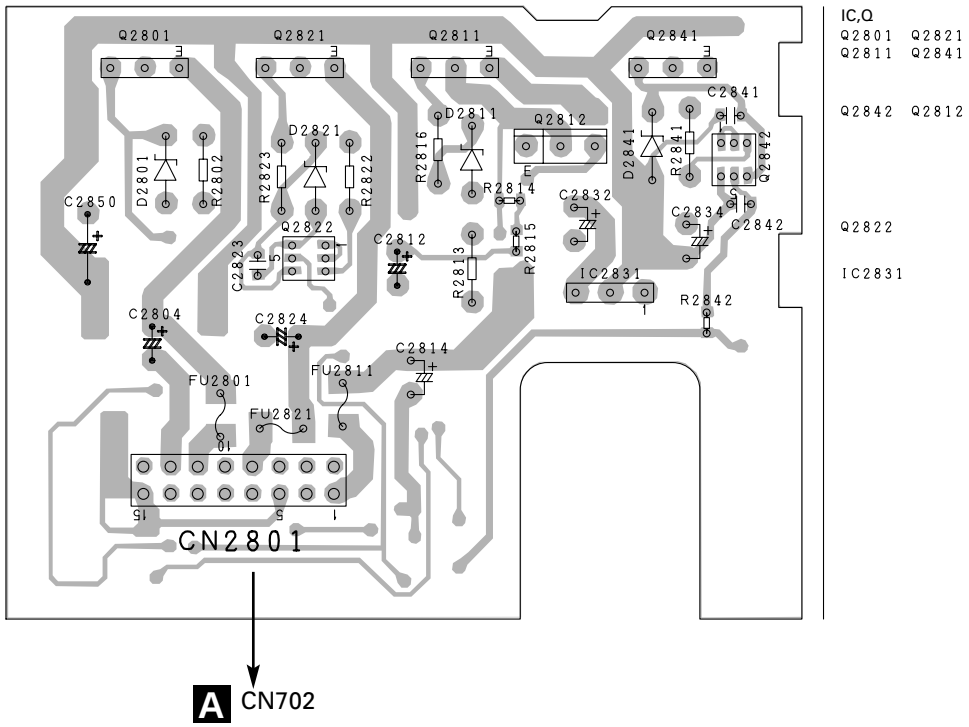


MC-Service

4.3 POWER SUPPLY UNIT

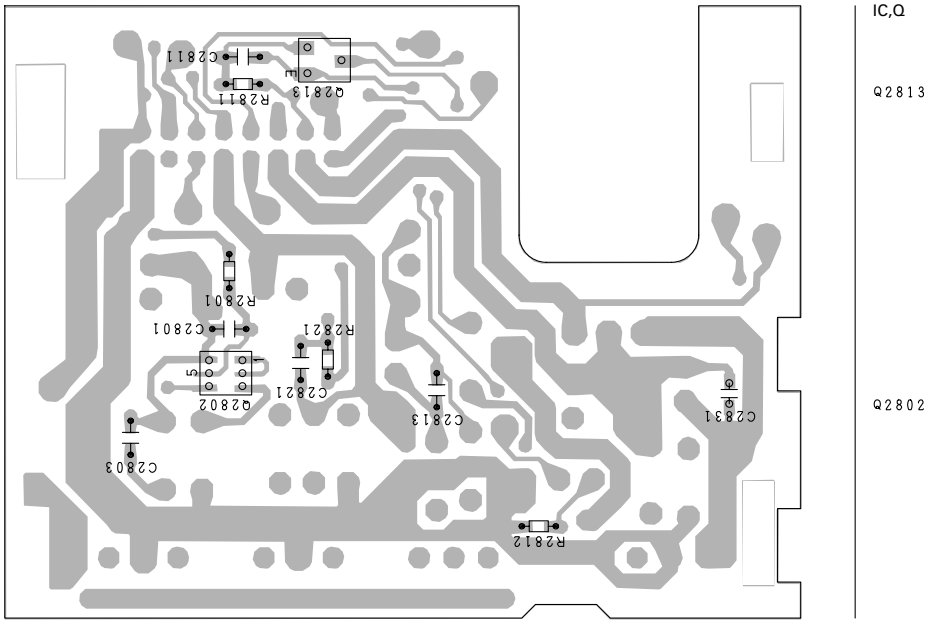
C POWER SUPPLY UNIT

SIDE A



C POWER SUPPLY UNIT

SIDE B

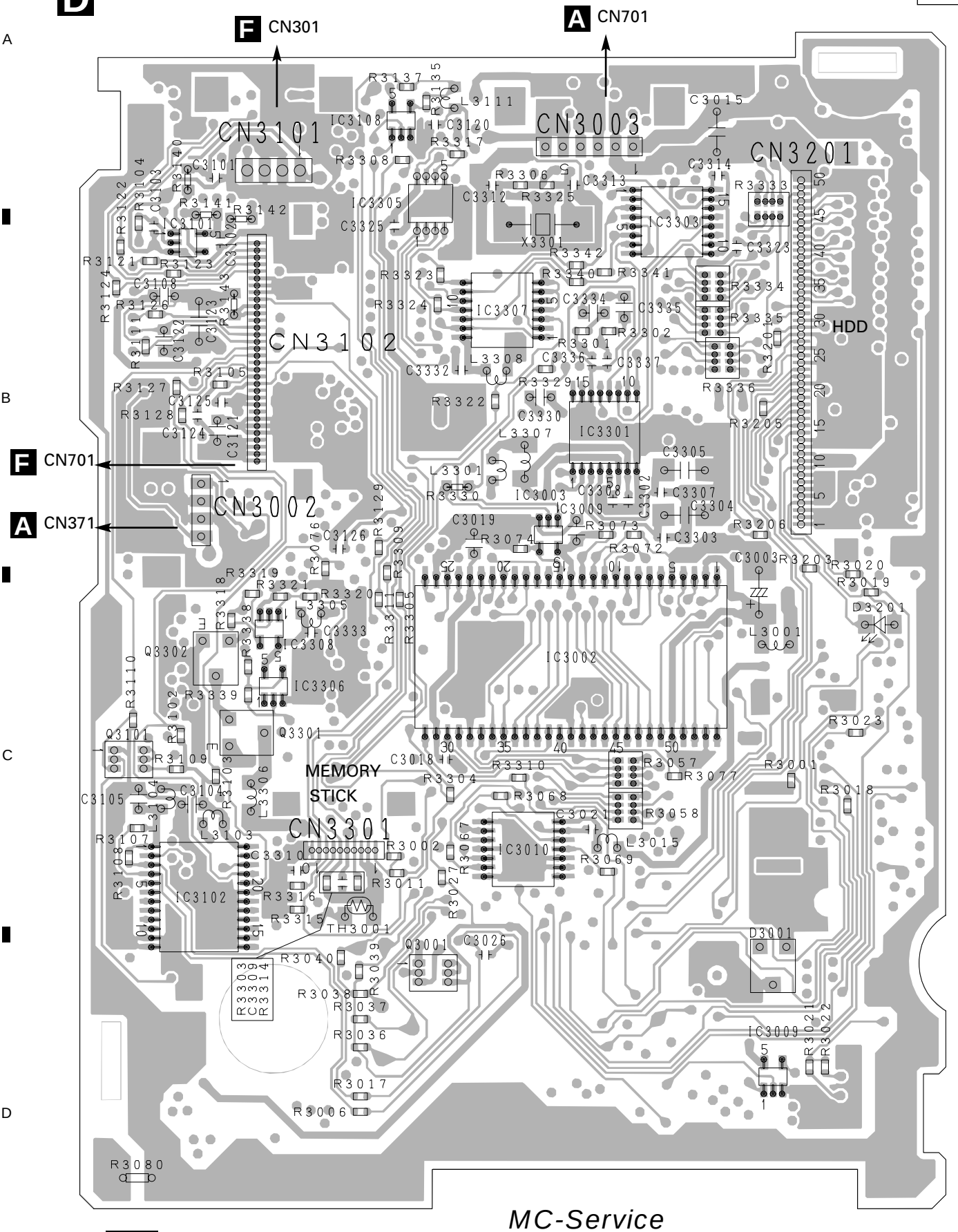


MC-Service

4.4 DIGITAL UNIT

D DIGITAL UNIT

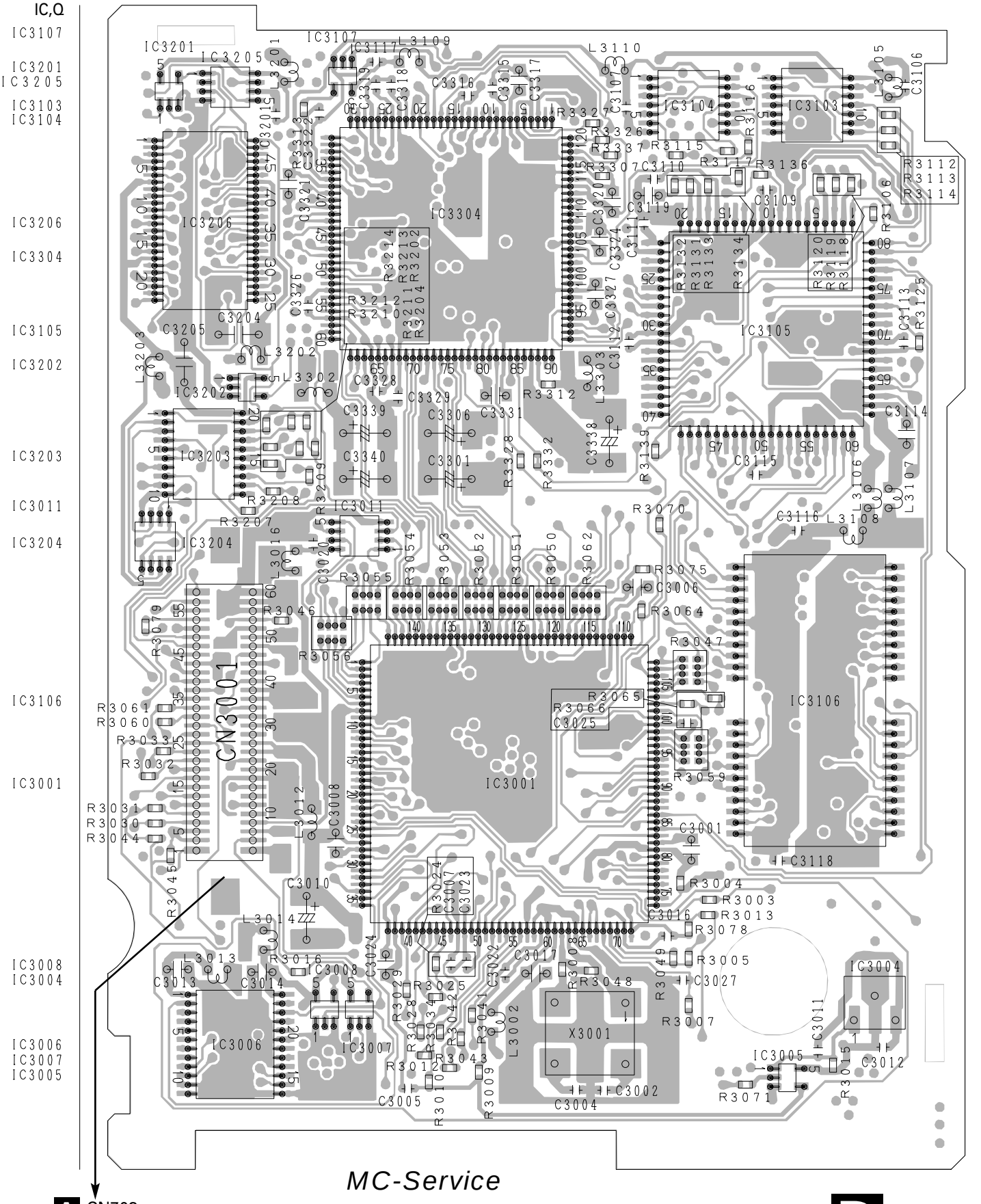
SIDE A



MC-Service

D DIGITAL UNIT

SIDE B

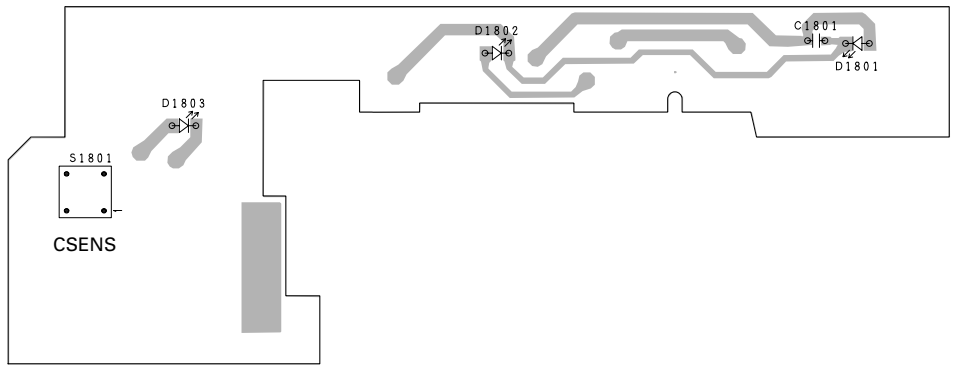


D

4.5 PANEL UNIT

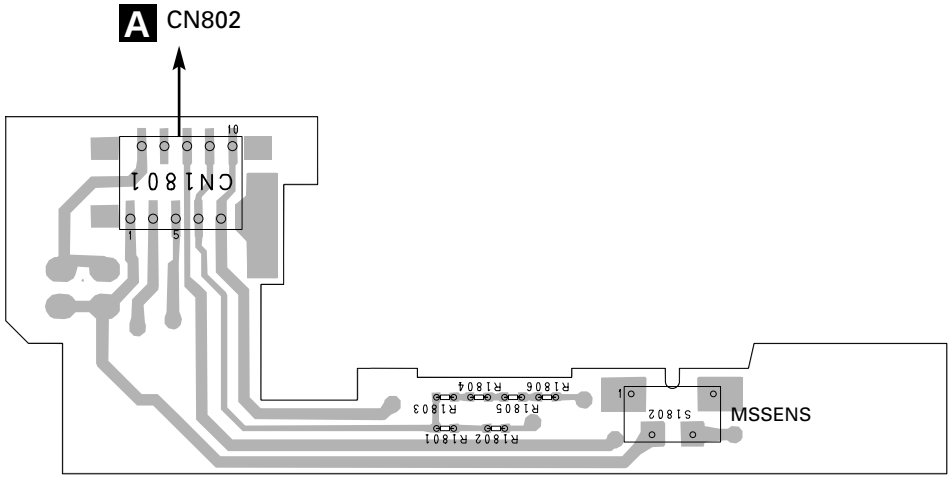
E PANEL UNIT

SIDE A



E PANEL UNIT

SIDE B

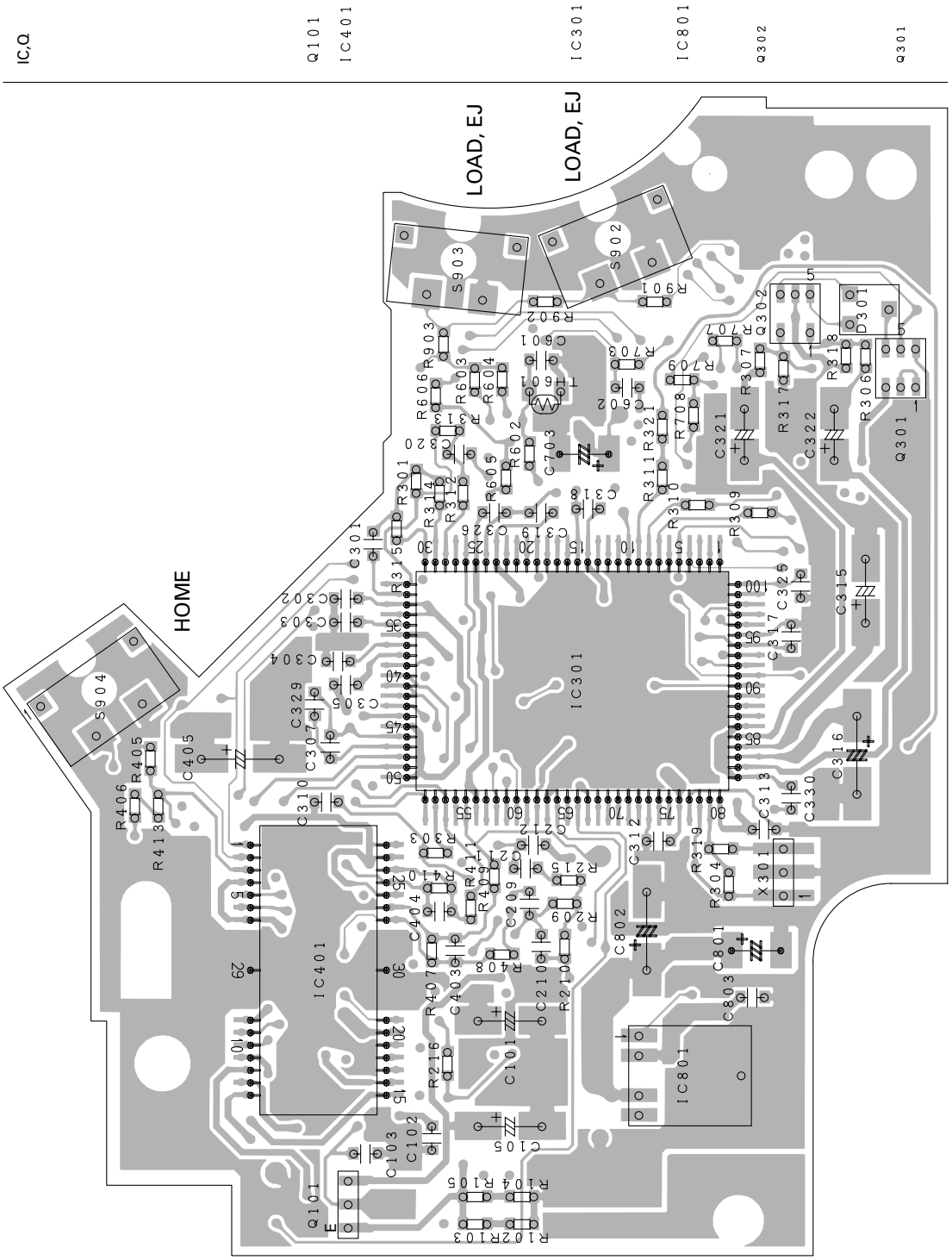


MC-Service

4.6 CD MECHANISM MODULE

F CD CORE UNIT

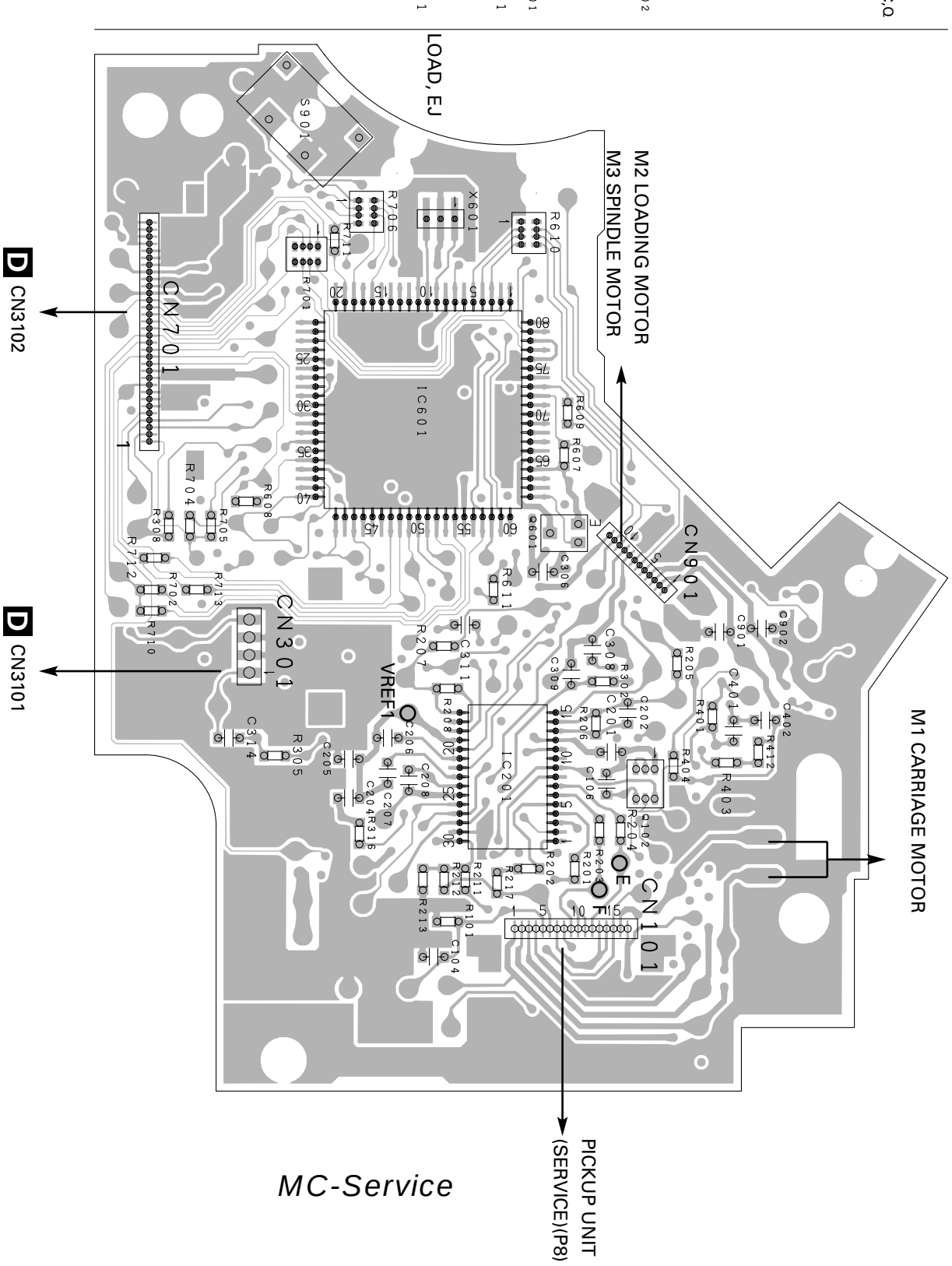
SIDE A



MC-Service

F CD CORE UNIT

SIDE B



MC-Service

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

A Unit Number : CWM7824(DEH-P90HDD/UC)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	HA12187FP
IC	141	IC	NJM2068MD
IC	142	IC	NJM2068MD
IC	201	IC	NJM2068MD
IC	202	IC	NJM2068MD
IC	203	IC	NJM2068MD
IC	204	IC	NJM2068MD
IC	205	IC	PDG262A
IC	206	IC	TC7WH34FU
IC	291	IC	PD5704A
IC	301	IC	PAL006A
IC	371	IC	TC74VHC126FT
IC	372	IC	TC7SH08FU
IC	373	IC	TC7SH08FU
IC	381	IC	PML011A
IC	551	IC	AK4321VF
IC	552	IC	TC7SET08FU
IC	601	IC	PD5646A
IC	602	IC	TC7S32FU
IC	731	IC	NJU7223DL1-33
IC	741	IC	NJM2870F18
IC	742	IC	NJU7223DL1-33
IC	831	IC	NJM2068MD
IC	911	IC	TC7SET32FU
IC	931	IC	TC7S08FU
IC	961	IC	S-80735ANDZI
IC	971	IC	BA033FP
Q	101	Transistor	2SA1162
Q	102	Transistor	DTC124EU
Q	131	Transistor	2SC2412K
Q	132	Transistor	IMD2A
Q	133	Transistor	2SC2412K
Q	331	Transistor	DTC124EU
Q	332	Transistor	DTC124EU
Q	351	Transistor	IMH3A
Q	352	Transistor	IMH3A
Q	353	Transistor	IMH3A
Q	371	Transistor	IMD2A
Q	381	Transistor	DTC124EU
Q	401	Transistor	2SC2412K
Q	591	Transistor	2SD1859
Q	592	Transistor	IMD2A
Q	761	Transistor	2SB1238
Q	762	Transistor	DTC143EU
Q	771	Transistor	IMD2A
Q	801	Transistor	2SD1760F5
Q	802	Transistor	IMD2A
Q	806	Transistor	2SD1859
Q	807	Transistor	IMD2A
Q	831	Transistor	DTC314TU

=====Circuit Symbol and No.		===Part Name	Part No.
Q	832	Transistor	DTC314TU
Q	833	Transistor	IMD2A
Q	851	Transistor	IMD2A
Q	852	Transistor	2SC2412K
Q	853	Transistor	2SD1859
Q	911	Transistor	2SD1760F5
Q	912	Transistor	IMD2A
Q	913	Transistor	2SD2396
Q	914	Transistor	IMD2A
Q	921	Transistor	2SD2396
Q	922	Transistor	IMD2A
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EK
Q	951	Transistor	2SA1162
Q	962	Transistor	2SC2412K
Q	971	Transistor	2SB1238
Q	972	Transistor	DTC114EU
Q	973	Transistor	IMD2A
Q	991	Transistor	2SC2412K
Q	992	Transistor	2SC2412K
Q	993	Transistor	IMD2A
Q	994	Transistor	IMD2A
D	131	Diode	MA3039(L)
D	141	Diode	UDZS3R9(B)
D	142	Diode	RB706F-40
D	381	Diode	DAN202U
D	591	Diode	HZS12L(A1)
D	801	Diode Network	DA204U
D	802	Diode Network	DA204U
D	803	Diode Network	DA204U
D	804	Diode Network	DA204U
D	805	Diode	MA3062(M)
D	806	Diode	HZS6L(B1)
D	811	Diode Network	DA204U
D	812	Diode Network	DA204U
D	813	Diode	HZS11L(A1)
D	814	Diode Network	DA204U
D	815	Diode Network	DA204U
D	851	Diode	HZS9L(A2)
D	901	Diode	MPG06G-6415G50
D	902	Diode	MPG06G-6415G50
D	903	Diode	MPG06G-6415G50
D	904	Diode	MPG06G-6415G50
D	911	Diode	MPG06G-6415G50
D	912	Diode	HZS6L(B1)
D	913	Diode	MPG06G-6415G50
D	914	Diode	HZS9L(B1)
D	921	Diode	HZS6L(C2)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	933	Diode	MPG06G-6415G50
D	951	Diode	DAN202U
D	961	Diode	MA152K
D	971	Diode	IMN10
D	991	Diode	DAN202U

Circuit Symbol and No.		Part Name	Part No.
D	992	Diode	HZS9L(A2)
D	993	Diode	1SS133
D	994	Diode	DAN202U
ZNR	451	Surge Protector	DSPS-201M-S00B
L	101	Inductor	LAU3R3K
L	131	Inductor	CTF1399
L	132	Inductor	CTF1399
L	133	Inductor	CTF1399
L	134	Inductor	CTF1399
L	201	Inductor	CTF1379
L	202	Inductor	CTF1379
L	215	Inductor	CTF1379
L	216	Inductor	CTF1379
L	217	Inductor	CTF1379
L	218	Inductor	CTF1379
L	219	Inductor	CTF1379
L	220	Inductor	CTF1379
L	261	Inductor	CTF1379
L	262	Ferri-Inductor	LAU101K
L	263	Ferri-Inductor	LAU151K
L	291	Inductor	CTF1399
L	361	Filter	CTF1071
L	371	Inductor	CTF1379
L	372	Inductor	CTF1379
L	376	Inductor	LCYC4R7K1608
L	377	Inductor	CTF1357
L	401	Inductor	LAU100K
L	402	Inductor	LCTB4R7K2125
L	404	Ferri-Inductor	LAU2R2K
L	405	Inductor	CTF1399
L	491	Inductor	CTF1399
L	551	Ferri-Inductor	LAU2R2K
L	601	Inductor	LAU100K
L	701	Inductor	CTF1379
L	731	Inductor	CTF1484
L	741	Ferri-Inductor	LAU2R2K
L	742	Inductor	LAU1R0K
L	761	Inductor	LAU100K
L	771	Inductor	LAU100K
L	801	Inductor	LAU100K
L	802	Inductor	CTF1489
L	803	Inductor	CTF1488
L	804	Inductor	CTF1488
L	951	Ferri-Inductor	LAU2R2K
L	971	Ferri-Inductor	LAU2R2K
L	972	Inductor	LAU1R0K
L	973	Ferri-Inductor	LAU2R2K
X	261	Radiator 16.9344MHz	CSS1463
X	291	Radiator 10.00MHz	CSS1428
X	601	Radiator 10.00MHz	CSS1475
VR	141	Semi-fixed 10kΩ(B)	CCP1448
FU	701	Fuse 3.15A	CEK1207
MIC	141	Microphone	CPM1011
		FM/AM Tuner Unit	CWE1605
BZ	641	Buzzer	CPV1050
		Fan Motor	CXM1186

RESISTORS

Circuit Symbol and No.		Part Name	Part No.
R	101		RS1/16S101J
R	102		RS1/16S620J
R	103		RS1/16S101J
R	104		RS1/16S222J
R	105		RS1/16S103J
R	106		RS1/16S562J
R	107		RS1/16S332J
R	108		RS1/16S181J
R	109		RS1/16S181J
R	110		RS1/16S223J
R	111		RS1/16S223J
R	112		RS1/16S102J
R	113		RS1/16S102J
R	114		RS1/16S0R0J
R	131		RS1/16S104J
R	132		RS1/16S222J
R	133		RS1/16S103J
R	134		RS1/16S561J
R	135		RS1/16S223J
R	136		RS1/16S473J
R	137		RS1/16S153J
R	138		RS1/16S683J
R	139		RS1/16S152J
R	140		RS1/16S682J
R	141		RS1/16S222J
R	142		RS1/16S152J
R	143		RS1/16S152J
R	144		RS1/16S104J
R	145		RS1/16S101J
R	146		RS1/16S563J
R	147		RS1/16S102J
R	148		RS1/16S103J
R	149		RS1/16S103J
R	150		RS1/16S153J
R	151		RS1/16S153J
R	152		RS1/16S223J
R	153		RN1/16SE4702D
R	154		RN1/16SE4702D
R	160		RS1/16S473J
R	161		RS1/16S272J
R	162		RS1/16S272J
R	163		RS1/16S162J
R	164		RS1/16S162J
R	171		RS1/16S0R0J
R	172		RS1/16S0R0J
R	201		RS1/16S474J
R	202		RS1/16S474J
R	203		RS1/16S223J
R	204		RS1/16S223J
R	205		RS1/16S472J
R	206		RS1/16S472J
R	207		RS1/16S225J
R	208		RS1/16S155J
R	215		RS1/16S474J
R	216		RS1/16S474J
R	217		RS1/16S474J
R	218		RS1/16S474J
R	219		RS1/16S474J
R	220		RS1/16S474J
R	221		RS1/16S222J
R	222		RS1/16S222J
R	223		RS1/16S222J
R	224		RS1/16S222J
R	225		RS1/16S222J
R	226		RS1/16S222J
R	227		RS1/16S333J
R	228		RS1/16S333J
R	229		RS1/16S333J
R	230		RS1/16S333J
R	231		RS1/16S333J
R	232		RS1/16S333J
R	233		RS1/16S273J
R	234		RS1/16S273J
R	235		RS1/16S273J
R	236		RS1/16S273J

=====Circuit Symbol and No.	===Part Name	Part No.
R 237		RS1/16S273J
R 238		RS1/16S273J
R 239		RS1/16S183J
R 240		RS1/16S183J
R 241		RS1/16S183J
R 242		RS1/16S183J
R 243		RS1/16S183J
R 244		RS1/16S183J
R 245		RS1/16S273J
R 246		RS1/16S273J
R 247		RS1/16S273J
R 248		RS1/16S273J
R 249		RS1/16S273J
R 250		RS1/16S273J
R 251		RS1/16S103J
R 252		RS1/16S103J
R 253		RS1/16S103J
R 254		RS1/16S103J
R 261		RS1/16S331J
R 262		RAB4C221J
R 263		RS1/16S221J
R 264		RS1/16S221J
R 265		RS1/16S221J
R 266		RS1/16S102J
R 267		RS1/16S221J
R 282		RS1/16S103J
R 283		RS1/16S103J
R 284		RS1/16S153J
R 291		RAB4C681J
R 292		RS1/16S473J
R 293		RS1/16S102J
R 294		RS1/16S473J
R 295		RS1/16S102J
R 296		RS1/16S105J
R 297		RS1/16S102J
R 298		RS1/16S471J
R 299		RS1/16S102J
R 300		RAB4C473J
R 301		RAB4C681J
R 302		RS1/16S222J
R 303		RS1/16S104J
R 304		RAB4C471J
R 305		RS1/16S473J
R 306		RS1/16S102J
R 307		RS1/16S102J
R 308		RS1/16S473J
R 309		RS1/16S102J
R 310		RS1/16S102J
R 312		RS1/16S104J
R 313		RS1/16S222J
R 314		RS1/16S222J
R 315		RS1/16S473J
R 316		RAB4C0R0J
R 317		RS1/16S102J
R 318		RS1/16S473J
R 321		RS1/16S472J
R 322		RS1/16S104J
R 325		RS1/16S102J
R 326		RS1/16S0R0J
R 327		RS1/16S473J
R 328		RS1/16S473J
R 329		RAB4C681J
R 331		RS1/16S103J
R 332		RS1/16S103J
R 333		RS1/16S103J

=====Circuit Symbol and No.	===Part Name	Part No.
R 334		RS1/16S331J
R 351		RS1/16S821J
R 352		RS1/16S821J
R 353		RS1/16S821J
R 354		RS1/16S821J
R 355		RS1/16S821J
R 356		RS1/16S821J
R 357		RS1/16S223J
R 358		RS1/16S223J
R 359		RS1/16S223J
R 360		RS1/16S223J
R 361		RS1/16S223J
R 362		RS1/16S223J
R 366		RS1/16S101J
R 367		RS1/16S0R0J
R 369		RS1/16S0R0J
R 371		RS1/16S102J
R 372		RS1/16S102J
R 373		RS1/16S102J
R 374		RS1/16S102J
R 375		RS1/16S102J
R 376		RS1/16S102J
R 377		RS1/16S102J
R 378		RS1/16S102J
R 379		RS1/16S221J
R 380		RS1/16S221J
R 381		RS1/16S682J
R 385		RS1/10S0R0J
R 401		RS1/16S473J
R 402		RS1/16S473J
R 403		RS1/16S681J
R 404		RS1/16S681J
R 409		RS1/16S681J
R 410		RS1/16S103J
R 411		RS1/16S681J
R 412		RS1/16S681J
R 413		RS1/16S681J
R 414		RS1/16S473J
R 415		RS1/16S472J
R 416		RS1/16S473J
R 417		RS1/16S473J
R 418		RS1/16S473J
R 419		RS1/16S222J
R 420		RS1/16S222J
R 423		RS1/16S0R0J
R 424		RS1/16S393J
R 430		RS1/16S0R0J
R 431		RS1/16S0R0J
R 507		RS1/16S0R0J
R 551		RS1/16S222J
R 552		RS1/16S102J
R 553		RS1/16S102J
R 554		RS1/16S102J
R 555		RS1/16S222J
R 556		RS1/16S222J
R 557		RS1/16S222J
R 558		RS1/16S681J
R 559		RS1/16S681J
R 560		RS1/16S332J
R 561		RS1/16S332J
R 562		RS1/16S332J
R 563		RS1/16S332J
R 564		RS1/16S101J
R 565		RS1/16S101J
R 591		RS1/10S1R0J

Circuit Symbol and No.	Part Name	Part No.
R 592		RS1/16S102J
R 593		RS1/16S102J
R 601		RS1/16S473J
R 602		RS1/16S102J
R 603		RS1/16S473J
R 604		RS1/16S472J
R 605		RS1/16S221J
R 606		RS1/16S682J
R 607		RS1/16S221J
R 608		RS1/16S682J
R 609		RS1/16S102J
R 610		RS1/16S102J
R 613		RS1/16S473J
R 615		RS1/16S221J
R 616		RS1/16S682J
R 617		RS1/16S221J
R 618		RS1/16S682J
R 619		RS1/16S221J
R 620		RS1/16S473J
R 621		RS1/16S221J
R 622		RS1/16S682J
R 623		RS1/16S102J
R 624		RS1/16S473J
R 625		RS1/16S473J
R 627		RS1/16S473J
R 631		RS1/16S473J
R 632		RS1/16S0R0J
R 633		RS1/16S0R0J
R 634		RS1/16S0R0J
R 635		RS1/16S0R0J
R 636		RS1/16S0R0J
R 637		RS1/16S473J
R 639		RS1/16S473J
R 641		RS1/16S102J
R 651		RS1/16S473J
R 701		RS1/10S102J
R 702		RS1/10S102J
R 703		RS1/10S102J
R 704		RS1/10S102J
R 705		RS1/10S102J
R 706		RS1/10S0R0J
R 761		RS1/16S472J
R 762		RS1/16S102J
R 801		RS1/10S222J
R 802		RS1/10S222J
R 803		RS1/10S222J
R 804		RS1/10S103J
R 805		RS1/10S472J
R 810		RS1/16S221J
R 811		RS1/16S221J
R 812		RS1/16S821J
R 813		RS1/16S681J
R 817		RS1/16S473J
R 820		RS1/10S1R0J
R 823		RS1/10S222J
R 824		RS1/10S222J
R 825		RS1/10S221J
R 826		RS1/10S221J
R 831		RS1/16S102J
R 832		RS1/16S102J
R 833		RS1/16S333J
R 834		RS1/16S333J
R 835		RS1/16S473J
R 836		RS1/16S473J
R 837		RS1/16S223J
R 838		RS1/16S223J
R 839		RS1/16S102J
R 840		RS1/16S102J
R 851		RS1/16S182J
R 855		RS1/16S560J
R 856		RS1/16S222J
R 857		RS1/16S222J
R 858		RS1/16S222J
R 859		RS1/16S102J
R 912		RS1/16S562J
R 913		RS1/16S101J
R 914		RS1/10S0R0J
R 915		RS1/16S123J
R 916		RS1/16S471J
R 921		RS1/16S681J
R 922		RS1/16S561J
R 931		RS1/10S472J
R 932		RS1/16S473J
R 933		RS1/16S103J
R 934		RS1/16S473J
R 935		RS1/16S104J
R 936		RS1/16S103J
R 937		RS1/16S473J
R 938		RS1/16S102J
R 951		RS1/10S153J
R 952		RS1/16S472J
R 953		RS1/16S472J
R 954		RS1/16S102J
R 961		RS1/16S102J
R 962		RS1/16S102J
R 963		RS1/16S473J
R 964		RS1/16S822J
R 965		RS1/16S102J
R 971		RS1/16S472J
R 972		RS1/16S102J
R 973		RS1/16S473J
R 974		RS1/16S473J
R 975		RS1/16S473J
R 976		RS1/16S0R0J
R 987		RS1/16S101J
R 991		RS1/16S223J
R 992		RS1/16S473J
R 993		RS1/16S104J
R 994		RS1/16S473J
R 995		RS1/16S224J
R 996		RS1/16S473J
R 997		RS1/16S102J

CAPACITORS

Circuit Symbol and No.	Part Name	Part No.
C 101		CKSRYB104K16
C 102		CKSRYB104K16
C 103		CKSRYB104K16
C 105		CCSRCH101J50
C 106		CCSRCH101J50
C 107		CCSRCH101J50
C 108		CCSRCH101J50
C 131		CKSRYB681K50
C 132		CEAL101M10
C 133		CKSQYB225K10
C 141		CEJQ470M10
C 142		CKSRYB105K10
C 143		CKSRYB105K10
C 144		CCSRCH101J50
C 145		CKSYB475K16

Circuit Symbol and No.		Part Name	Part No.
C	146		CKSRYB105K10
C	147		CKSRYB104K16
C	148		CKSYB475K16
C	149		CKSRYB474K10
C	150		CKSRYB105K10
C	151		CKSRYB104K16
C	152		CKSYB106K6R3
C	153		CKSRYB104K16
C	161		CKSRYB183K25
C	162		CKSRYB183K25
C	201		CKSRYB105K10
C	202		CKSRYB105K10
C	203		CKSRYB102K50
C	204		CKSRYB102K50
C	205		CCSRCH221J50
C	206		CCSRCH221J50
C	209		CKSQYB225K10
C	210		CKSQYB225K10
C	213		CKSYB475K10
C	215		CKSRYB105K10
C	216		CKSRYB105K10
C	217		CKSRYB105K10
C	218		CKSRYB105K10
C	219		CKSRYB105K10
C	220		CKSRYB105K10
C	221		CCSRCH221J50
C	222		CCSRCH221J50
C	223		CCSRCH221J50
C	224		CCSRCH221J50
C	225		CCSRCH221J50
C	226		CCSRCH221J50
C	227		CCSRCH151J50
C	228		CCSRCH151J50
C	229		CCSRCH151J50
C	230		CCSRCH151J50
C	231		CCSRCH151J50
C	232		CCSRCH151J50
C	233		CCSRCH151J50
C	234		CCSRCH151J50
C	235		CCSRCH151J50
C	236		CCSRCH151J50
C	237		CCSRCH151J50
C	238		CCSRCH151J50
C	239		CKSQYB225K10
C	240		CKSQYB225K10
C	241		CKSQYB225K10
C	242		CKSQYB225K10
C	243		CKSQYB225K10
C	244		CKSQYB225K10
C	251		CKSRYB105K10
C	252		CKSRYB105K10
C	253		CKSRYB105K10
C	254		CKSRYB105K10
C	255		CKSRYB105K10
C	256		CKSRYB105K10
C	257		CSZSR100M16
C	258		CSZSR100M16
C	259		CKSYB475K10
C	261		CKSRYB102K50
C	262		CKSRYB102K50
C	263		CKSYB475K10
C	264		CKSRYB104K16
C	265		CKSRYB104K16
C	266		CKSRYB104K16
C	267		CKSRYB104K16

Circuit Symbol and No.		Part Name	Part No.
C	268		CKSRYB104K16
C	269		CKSRYB104K16
C	270		CKSRYB104K16
C	271		CCSRCH180J50
C	272		CCSRCH180J50
C	273		CKSRYB104K16
C	274		CKSRYB104K16
C	275		CKSRYB104K16
C	276		CKSRYB104K16
C	277		CKSRYB104K16
C	278		CKSYB475K10
C	279		CEV101M6R3
C	280		CEV221M4
C	281		CKSRYB102K50
C	282		CKSRYB104K16
C	283		CKSRYB104K16
C	284		CKSYB475K10
C	285		CKSRYB104K16
C	286		CKSRYB104K16
C	287		CKSRYB105K10
C	289		CKSRYB103K50
C	290		CKSRYB103K50
C	291		CKSYB106K6R3
C	301		CCSRCH101J50
C	302		CCSRCH101J50
C	303		CCSRCH101J50
C	304		CCSRCH101J50
C	305		CCSRCH101J50
C	306		CCSRCH101J50
C	307		CKSRYB103K50
C	309		CCSRCH101J50
C	310		CCSRCH101J50
C	331		CKSRYB474K10
C	332		CKSRYB474K10
C	333		CKSRYB474K10
C	334		CKSRYB474K10
C	335		CKSRYB474K10
C	336		CKSRYB474K10
C	337		CKSRYB474K10
C	338		CKSRYB474K10
C	339		CEHAR330M10
C	340	3300µF/16V	CCH1125
C	341		CKSRYB104K16
C	342		CEHAR100M16
C	343		CKSYB225K16
C	344		CKSYB225K16
C	351		CEAL100M16
C	352		CEAL100M16
C	353		CEAL100M16
C	354		CEAL100M16
C	355		CEAL100M16
C	356		CEAL100M16
C	357		CCSRCH221J50
C	358		CCSRCH221J50
C	359		CCSRCH221J50
C	360		CCSRCH221J50
C	361		CCSRCH221J50
C	362		CCSRCH221J50
C	370		CKSRYB105K10
C	371		CKSRYB103K50
C	372		CKSRYB103K50
C	376		CCSRCH7R0D50
C	381		CKSRYB104K16
C	382		CSZSR100M10
C	383		CSZSR100M10

=====Circuit Symbol and No.		===Part Name	Part No.
C	384		CKSRYB105K10
C	385		CKSQYB225K10
C	386		CKSQYB225K10
C	387		CKSQYB225K10
C	388		CKSQYB225K10
C	389		CKSRYB105K10
C	390		CKSRYB105K10
C	391		CKSRYB105K10
C	392		CKSRYB104K16
C	393		CKSRYB472K50
C	394		CKSRYB472K50
C	403		CKSRYB473K50
C	404		CEJQ101M10
C	405		CKSRYB103K50
C	406		CEJQ220M10
C	407		CKSQYB103K50
C	408		CKSRYB223K50
C	409		CKSRYB223K50
C	411		CKSRYB472K50
C	416		CKSRYB473K50
C	420		CCSRCH101J50
C	421		CKSRYB104K16
C	422		CKSRYB104K16
C	424		CKSRYB103K50
C	512		CKSRYB104K16
C	551		CEAL470M10
C	552		CEAL100M16
C	553		CEAL100M16
C	554		CKSRYB104K16
C	555		CKSRYB104K16
C	556		CKSRYB104K16
C	557		CKSRYB104K16
C	558		CKSRYB104K16
C	559		CKSRYB105K10
C	560		CKSRYB105K10
C	561		CKSRYB222K50
C	562		CKSRYB222K50
C	563		CKSRYB103K50
C	591		CEJQ100M16
C	592		CKSRYB103K50
C	593		CKSRYB103K50
C	601		CCSRCH220J50
C	602		CCSRCH150J50
C	604		CKSRYB103K50
C	605		CKSYB475K10
C	607		CCSRCH101J50
C	631		CKSRYB103K50
C	632		CKSRYB103K50
C	633		CKSRYB103K50
C	701		CKSYB225K16
C	702		CKSQYB104K16
C	703		CKSYB225K16
C	704		CKSQYB104K16
C	705		CKSQYB104K16
C	706		CKSQYB104K16
C	707		CKSYB225K16
C	708		CEAL101M10
C	709		CKSYB225K16
C	710		CKSRYB104K16
C	731		CKSRYB103K50
C	732		CKSRYB103K50
C	733		CEAL220M16
C	734		CEAL101M10
C	735		CKSRYB104K16
C	736		CKSRYB104K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	741		CKSRYB103K50
C	742		CKSRYB103K50
C	743		CEAL470M6R3
C	744		CKSRYB104K16
C	745		CKSRYB104K16
C	747		CKSYB475K10
C	748		CKSRYB103K50
C	749		CEAL470M6R3
C	750		CKSRYB105K10
C	755		CKSRYB104K16
C	761		CKSRYB103K50
C	762		CKSRYB103K50
C	763		CEAL220M16
C	771		CKSRYB103K50
C	772		CKSRYB103K50
C	773		CEAL220M16
C	805		CEJQ470M10
C	807		CKSRYB102K50
C	808		CKSYB475K16
C	809		CKSRYB104K16
C	810		CEJQ470M10
C	811		CKSRYB103K50
C	812		CKSYB475K16
C	814		CKSRYB103K50
C	815		CKSRYB104K16
C	816		CEJQ470M10
C	817		CKSYB475K16
C	818		CEVQ220M16
C	820		CKSYB475K16
C	827		CKSRYB103K50
C	828		CCSRCH101J50
C	831		CCSRCH470J50
C	832		CCSRCH470J50
C	833		CKSYB475K10
C	835		CKSYB475K10
C	836		CKSYB475K10
C	837		CKSYB475K10
C	838		CKSYB475K10
C	839		CKSRYB105K10
C	840		CKSRYB105K10
C	851		CKSRYB104K16
C	902		CKSRYB102K50
C	903		CKSRYB102K50
C	904		CKSRYB102K50
C	905		CKSRYB102K50
C	906		CKSRYB102K50
C	907		CKSRYB102K50
C	908		CKSRYB102K50
C	909		CKSRYB102K50
C	911		CEHAT102M16
C	912		CKSRYB103K50
C	913		CEAL470M10
C	914		CKSRYB103K50
C	915		CKSRYB103K50
C	916		CEAL470M16
C	917		CKSRYB103K50
C	918	2200µF/16V	CCH1439
C	921		CEALR33M50
C	922		CEAL470M10
C	923		CKSRYB103K50
C	931		CKSYB105K16
C	933		CKSRYB103K50
C	961		CKSRYB102K50
C	962		CKSRYB104K16
C	963		CEJQ2R2M50

=====Circuit Symbol and No.		===Part Name	Part No.
C	971		CKSRYB104K16
C	972		CKSYB106K6R3
C	973		CKSRYB103K50
C	974		CKSRYB103K50
C	975		CEVQ220M16
C	976		CKSRYB103K50
C	977		CKSYB475K16
C	978		CKSRYB103K50
C	979		CEAL470M16
C	980		CKSRYB103K50
C	981		CEAL220M16
C	982		CEALR33M50
C	991		CEAL220M16

A Unit Number : CWM7823(DEH-P900HDD/EW)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC	101	IC	HA12187FP
IC	141	IC	NJM2068MD
IC	142	IC	NJM2068MD
IC	201	IC	NJM2068MD
IC	202	IC	NJM2068MD
IC	203	IC	NJM2068MD
IC	204	IC	NJM2068MD
IC	205	IC	PDG262A
IC	206	IC	TC7WH34FU
IC	291	IC	PD5704A
IC	301	IC	PAL006A
IC	371	IC	TC74VHC126FT
IC	372	IC	TC7SH08FU
IC	373	IC	TC7SH08FU
IC	381	IC	PML011A
IC	501	IC	PM4009A
IC	551	IC	AK4321VF
IC	552	IC	TC7SET08FU
IC	601	IC	PD5647A
IC	602	IC	TC7S32FU
IC	731	IC	NJU7223DL1-33
IC	741	IC	NJM2870F18
IC	742	IC	NJU7223DL1-33
IC	831	IC	NJM2068MD
IC	911	IC	TC7SET32FU
IC	931	IC	TC7S08FU
IC	961	IC	S-80735ANDZI
IC	971	IC	BA033FP
Q	101	Transistor	2SA1162
Q	102	Transistor	DTC124EU
Q	131	Transistor	2SC2412K
Q	132	Transistor	IMD2A
Q	133	Transistor	2SC2412K
Q	171	Transistor	2SD1757K
Q	172	Transistor	2SD1757K
Q	173	Transistor	IMH3A
Q	174	Transistor	DTA114EU
Q	175	Transistor	2SC2412K
Q	331	Transistor	DTC124EU
Q	332	Transistor	DTC124EU
Q	351	Transistor	IMH3A
Q	352	Transistor	IMH3A
Q	353	Transistor	IMH3A
Q	371	Transistor	IMD2A
Q	381	Transistor	DTC124EU
Q	401	Transistor	2SC2412K
Q	402	Transistor	2SC2412K
Q	501	Transistor	DTA123EU
Q	591	Transistor	2SD1859
Q	592	Transistor	IMD2A

=====Circuit Symbol and No.		===Part Name	Part No.
Q	761	Transistor	2SB1238
Q	762	Transistor	DTC143EU
Q	771	Transistor	IMD2A
Q	801	Transistor	2SD1760F5
Q	802	Transistor	IMD2A
Q	806	Transistor	2SD1859
Q	807	Transistor	IMD2A
Q	831	Transistor	DTC314TU
Q	832	Transistor	DTC314TU
Q	833	Transistor	IMD2A
Q	851	Transistor	IMD2A
Q	852	Transistor	2SC2412K
Q	853	Transistor	2SD1859
Q	911	Transistor	2SD1760F5
Q	912	Transistor	IMD2A
Q	913	Transistor	2SD2396
Q	914	Transistor	IMD2A
Q	921	Transistor	2SD2396
Q	922	Transistor	IMD2A
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EK
Q	951	Transistor	2SA1162
Q	962	Transistor	2SC2412K
Q	971	Transistor	2SB1238
Q	972	Transistor	DTC114EU
Q	973	Transistor	IMD2A
Q	991	Transistor	2SC2412K
Q	992	Transistor	2SC2412K
Q	993	Transistor	IMD2A
Q	994	Transistor	IMD2A
D	131	Diode	MA3039(L)
D	141	Diode	UDZS3R9(B)
D	142	Diode	RB706F-40
D	381	Diode	DAN202U
D	591	Diode	HZS12L(A1)
D	801	Diode Network	DA204U
D	802	Diode Network	DA204U
D	803	Diode Network	DA204U
D	804	Diode Network	DA204U
D	805	Diode	MA3062(M)
D	806	Diode	HZS6L(B1)
D	811	Diode Network	DA204U
D	812	Diode Network	DA204U
D	813	Diode	HZS11L(A1)
D	814	Diode Network	DA204U
D	815	Diode Network	DA204U
D	851	Diode	HZS9L(A2)
D	901	Diode	MPG06G-6415G50
D	902	Diode	MPG06G-6415G50
D	903	Diode	MPG06G-6415G50
D	904	Diode	MPG06G-6415G50
D	911	Diode	MPG06G-6415G50
D	912	Diode	HZS6L(B1)
D	913	Diode	MPG06G-6415G50
D	914	Diode	HZS9L(B1)
D	921	Diode	HZS6L(C2)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	933	Diode	MPG06G-6415G50
D	951	Diode	DAN202U
D	961	Diode	MA152K
D	971	Diode	IMN10
D	991	Diode	DAN202U
D	992	Diode	HZS9L(A2)
D	993	Diode	1SS133

Circuit Symbol and No.		Part Name	Part No.
D	994	Diode	DAN202U
ZNR	451	Surge Protector	DSPS-201M-S00B
L	101	Inductor	LAU3R3K
L	102	Inductor	CTF1399
L	131	Inductor	CTF1399
L	132	Inductor	CTF1399
L	133	Inductor	CTF1399
L	134	Inductor	CTF1399
L	201	Inductor	CTF1379
L	202	Inductor	CTF1379
L	215	Inductor	CTF1379
L	216	Inductor	CTF1379
L	217	Inductor	CTF1379
L	218	Inductor	CTF1379
L	219	Inductor	CTF1379
L	220	Inductor	CTF1379
L	261	Inductor	CTF1379
L	262	Ferri-Inductor	LAU101K
L	263	Ferri-Inductor	LAU151K
L	291	Inductor	CTF1399
L	361	Filter	CTF1071
L	371	Inductor	CTF1379
L	372	Inductor	CTF1379
L	376	Inductor	LCYC4R7K1608
L	377	Inductor	CTF1357
L	401	Inductor	LAU100K
L	402	Inductor	LCTB4R7K2125
L	404	Ferri-Inductor	LAU2R2K
L	405	Inductor	CTF1399
L	491	Inductor	CTF1399
L	501	Inductor	LCTB1R0K2125
L	502	Inductor	CTF1378
L	504	Inductor	CTF1378
L	505	Inductor	CTF1389
L	506	Inductor	CTF1378
L	551	Ferri-Inductor	LAU2R2K
L	601	Inductor	LAU100K
L	701	Inductor	CTF1379
L	731	Inductor	CTF1484
L	741	Ferri-Inductor	LAU2R2K
L	742	Inductor	LAU1R0K
L	761	Inductor	LAU100K
L	771	Inductor	LAU100K
L	801	Inductor	LAU100K
L	802	Inductor	CTF1489
L	803	Inductor	CTF1488
L	804	Inductor	CTF1488
L	951	Ferri-Inductor	LAU2R2K
L	971	Ferri-Inductor	LAU2R2K
L	972	Inductor	LAU1R0K
L	973	Ferri-Inductor	LAU2R2K
X	261	Radiator 16.9344MHz	CSS1463
X	291	Radiator 10.00MHz	CSS1428
X	501	Crystal Resonator 3.648MHz	CSS1447
X	601	Radiator 10.00MHz	CSS1475
VR	141	Semi-fixed 10kΩ(B)	CCP1448
FU	701	Fuse 3.15A	CEK1207
MIC	141	Microphone	CPM1011
		FM/AM Tuner Unit	CWE1604
BZ	641	Buzzer	CPV1050
		Fan Motor	CXM1186

RESISTORS

Circuit Symbol and No.		Part No.
R	101	RS1/16S101J
R	102	RS1/16S620J
R	103	RS1/16S101J
R	104	RS1/16S222J
R	105	RS1/16S103J
R	106	RS1/16S562J
R	107	RS1/16S332J
R	108	RS1/16S181J
R	109	RS1/16S181J
R	110	RS1/16S223J
R	111	RS1/16S223J
R	112	RS1/16S102J
R	113	RS1/16S102J
R	131	RS1/16S104J
R	132	RS1/16S222J
R	133	RS1/16S103J
R	134	RS1/16S561J
R	135	RS1/16S223J
R	136	RS1/16S473J
R	137	RS1/16S153J
R	138	RS1/16S683J
R	139	RS1/16S152J
R	140	RS1/16S682J
R	141	RS1/16S222J
R	142	RS1/16S152J
R	143	RS1/16S152J
R	144	RS1/16S104J
R	145	RS1/16S101J
R	146	RS1/16S563J
R	147	RS1/16S102J
R	148	RS1/16S103J
R	149	RS1/16S103J
R	150	RS1/16S153J
R	151	RS1/16S153J
R	152	RS1/16S223J
R	153	RN1/16SE4702D
R	154	RN1/16SE4702D
R	160	RS1/16S473J
R	161	RS1/16S162J
R	162	RS1/16S162J
R	163	RS1/16S272J
R	164	RS1/16S272J
R	165	RS1/16S104J
R	166	RS1/16S104J
R	173	RS1/16S224J
R	174	RS1/16S224J
R	175	RS1/16S222J
R	176	RS1/16S222J
R	177	RS1/16S223J
R	178	RS1/16S223J
R	179	RS1/16S224J
R	180	RS1/16S473J
R	201	RS1/16S474J
R	202	RS1/16S474J
R	203	RS1/16S223J
R	204	RS1/16S223J
R	205	RS1/16S472J
R	206	RS1/16S472J
R	207	RS1/16S225J
R	208	RS1/16S155J
R	215	RS1/16S474J
R	216	RS1/16S474J
R	217	RS1/16S474J
R	218	RS1/16S474J
R	219	RS1/16S474J
R	220	RS1/16S474J
R	221	RS1/16S222J
R	222	RS1/16S222J
R	223	RS1/16S222J
R	224	RS1/16S222J

Circuit Symbol and No.	Part Name	Part No.
R 225		RS1/16S222J
R 226		RS1/16S222J
R 227		RS1/16S333J
R 228		RS1/16S333J
R 229		RS1/16S333J
R 230		RS1/16S333J
R 231		RS1/16S333J
R 232		RS1/16S333J
R 233		RS1/16S273J
R 234		RS1/16S273J
R 235		RS1/16S273J
R 236		RS1/16S273J
R 237		RS1/16S273J
R 238		RS1/16S273J
R 239		RS1/16S183J
R 240		RS1/16S183J
R 241		RS1/16S183J
R 242		RS1/16S183J
R 243		RS1/16S183J
R 244		RS1/16S183J
R 245		RS1/16S273J
R 246		RS1/16S273J
R 247		RS1/16S273J
R 248		RS1/16S273J
R 249		RS1/16S273J
R 250		RS1/16S273J
R 251		RS1/16S103J
R 252		RS1/16S103J
R 253		RS1/16S103J
R 254		RS1/16S103J
R 261		RS1/16S331J
R 262		RAB4C221J
R 263		RS1/16S221J
R 264		RS1/16S221J
R 265		RS1/16S221J
R 266		RS1/16S102J
R 267		RS1/16S221J
R 282		RS1/16S103J
R 283		RS1/16S103J
R 284		RS1/16S153J
R 291		RAB4C681J
R 292		RS1/16S473J
R 293		RS1/16S102J
R 294		RS1/16S473J
R 295		RS1/16S102J
R 296		RS1/16S105J
R 297		RS1/16S102J
R 298		RS1/16S471J
R 299		RS1/16S102J
R 300		RAB4C473J
R 301		RAB4C681J
R 302		RS1/16S222J
R 303		RS1/16S104J
R 304		RAB4C471J
R 305		RS1/16S473J
R 306		RS1/16S102J
R 307		RS1/16S102J
R 308		RS1/16S473J
R 309		RS1/16S102J
R 310		RS1/16S102J
R 312		RS1/16S104J
R 313		RS1/16S222J
R 314		RS1/16S222J
R 315		RS1/16S473J
R 316		RAB4C0R0J

Circuit Symbol and No.	Part Name	Part No.
R 317		RS1/16S102J
R 318		RS1/16S473J
R 321		RS1/16S472J
R 322		RS1/16S104J
R 325		RS1/16S102J
R 326		RS1/16S0R0J
R 327		RS1/16S473J
R 328		RS1/16S473J
R 329		RAB4C681J
R 331		RS1/16S103J
R 332		RS1/16S103J
R 333		RS1/16S103J
R 334		RS1/16S331J
R 351		RS1/16S821J
R 352		RS1/16S821J
R 353		RS1/16S821J
R 354		RS1/16S821J
R 355		RS1/16S821J
R 356		RS1/16S821J
R 357		RS1/16S223J
R 358		RS1/16S223J
R 359		RS1/16S223J
R 360		RS1/16S223J
R 361		RS1/16S223J
R 362		RS1/16S223J
R 366		RS1/16S101J
R 367		RS1/16S0R0J
R 369		RS1/16S0R0J
R 371		RS1/16S102J
R 372		RS1/16S102J
R 373		RS1/16S102J
R 374		RS1/16S102J
R 375		RS1/16S102J
R 376		RS1/16S102J
R 377		RS1/16S102J
R 378		RS1/16S102J
R 379		RS1/16S221J
R 380		RS1/16S221J
R 381		RS1/16S682J
R 385		RS1/10S0R0J
R 401		RS1/16S473J
R 402		RS1/16S473J
R 403		RS1/16S681J
R 404		RS1/16S681J
R 405		RS1/16S681J
R 406		RS1/16S102J
R 407		RS1/16S473J
R 409		RS1/16S681J
R 410		RS1/16S103J
R 411		RS1/16S681J
R 412		RS1/16S681J
R 413		RS1/16S681J
R 414		RS1/16S473J
R 415		RS1/16S472J
R 416		RS1/16S473J
R 417		RS1/16S473J
R 418		RS1/16S473J
R 419		RS1/16S222J
R 420		RS1/16S222J
R 421		RS1/16S681J
R 422		RS1/16S681J
R 423		RS1/16S0R0J
R 424		RS1/16S393J
R 426		RS1/16S153J
R 427		RS1/16S474J

Circuit Symbol and No.	Part Name	Part No.
R 428		RS1/16S681J
R 430		RS1/16S0R0J
R 431		RS1/16S0R0J
R 501		RS1/16S102J
R 502		RS1/16S102J
R 503		RS1/16S102J
R 504		RS1/16S681J
R 505		RS1/16S102J
R 506		RS1/16S225J
R 507		RS1/16S0R0J
R 551		RS1/16S222J
R 552		RS1/16S102J
R 553		RS1/16S102J
R 554		RS1/16S102J
R 555		RS1/16S222J
R 556		RS1/16S222J
R 557		RS1/16S222J
R 558		RS1/16S681J
R 559		RS1/16S681J
R 560		RS1/16S332J
R 561		RS1/16S332J
R 562		RS1/16S332J
R 563		RS1/16S332J
R 564		RS1/16S101J
R 565		RS1/16S101J
R 591		RS1/10S1R0J
R 592		RS1/16S102J
R 593		RS1/16S102J
R 601		RS1/16S473J
R 602		RS1/16S102J
R 603		RS1/16S473J
R 604		RS1/16S472J
R 605		RS1/16S221J
R 606		RS1/16S682J
R 607		RS1/16S221J
R 608		RS1/16S682J
R 609		RS1/16S102J
R 610		RS1/16S102J
R 613		RS1/16S473J
R 615		RS1/16S221J
R 616		RS1/16S682J
R 617		RS1/16S221J
R 618		RS1/16S682J
R 619		RS1/16S221J
R 620		RS1/16S473J
R 621		RS1/16S221J
R 622		RS1/16S682J
R 623		RS1/16S102J
R 624		RS1/16S473J
R 625		RS1/16S473J
R 631		RS1/16S473J
R 632		RS1/16S0R0J
R 633		RS1/16S0R0J
R 634		RS1/16S0R0J
R 635		RS1/16S0R0J
R 636		RS1/16S0R0J
R 637		RS1/16S473J
R 639		RS1/16S473J
R 641		RS1/16S102J
R 651		RS1/16S473J
R 701		RS1/10S102J
R 702		RS1/10S102J
R 703		RS1/10S102J
R 704		RS1/10S102J
R 705		RS1/10S102J
R 706		RS1/10S0R0J
R 761		RS1/16S472J
R 762		RS1/16S102J
R 801		RS1/10S222J
R 802		RS1/10S222J
R 803		RS1/10S222J
R 804		RS1/10S103J
R 805		RS1/10S472J
R 810		RS1/16S221J
R 811		RS1/16S221J
R 812		RS1/16S821J
R 813		RS1/16S681J
R 817		RS1/16S473J
R 820		RS1/10S1R0J
R 823		RS1/10S222J
R 824		RS1/10S222J
R 825		RS1/10S221J
R 826		RS1/10S221J
R 831		RS1/16S102J
R 832		RS1/16S102J
R 833		RS1/16S333J
R 834		RS1/16S333J
R 835		RS1/16S473J
R 836		RS1/16S473J
R 837		RS1/16S223J
R 838		RS1/16S223J
R 839		RS1/16S102J
R 840		RS1/16S102J
R 851		RS1/16S182J
R 855		RS1/16S560J
R 856		RS1/16S222J
R 857		RS1/16S222J
R 858		RS1/16S222J
R 859		RS1/16S102J
R 912		RS1/16S562J
R 913		RS1/16S101J
R 914		RS1/10S0R0J
R 915		RS1/16S123J
R 916		RS1/16S471J
R 921		RS1/16S681J
R 922		RS1/16S561J
R 931		RS1/10S472J
R 932		RS1/16S473J
R 933		RS1/16S103J
R 934		RS1/16S473J
R 935		RS1/16S104J
R 936		RS1/16S103J
R 937		RS1/16S473J
R 938		RS1/16S102J
R 951		RS1/10S153J
R 952		RS1/16S472J
R 953		RS1/16S472J
R 954		RS1/16S102J
R 961		RS1/16S102J
R 962		RS1/16S102J
R 963		RS1/16S473J
R 964		RS1/16S822J
R 965		RS1/16S102J
R 971		RS1/16S472J
R 972		RS1/16S102J
R 973		RS1/16S473J
R 974		RS1/16S473J
R 975		RS1/16S473J
R 976		RS1/16S0R0J
R 987		RS1/16S101J

Circuit Symbol and No.	Part Name	Part No.
R 991		RS1/16S223J
R 992		RS1/16S473J
R 993		RS1/16S104J
R 994		RS1/16S473J
R 995		RS1/16S224J
R 996		RS1/16S473J
R 997		RS1/16S102J
CAPACITORS		
C 101		CKSRYB104K16
C 102		CKSRYB104K16
C 103		CKSRYB104K16
C 131		CKSRYB681K50
C 132		CEAL101M10
C 133		CKSQYB225K10
C 141		CEJQ470M10
C 142		CKSRYB105K10
C 143		CKSRYB105K10
C 144		CCSRCH101J50
C 145		CKSYB475K16
C 146		CKSRYB105K10
C 147		CKSRYB104K16
C 148		CKSYB475K16
C 149		CKSRYB474K10
C 150		CKSRYB105K10
C 151		CKSRYB104K16
C 152		CKSYB106K6R3
C 153		CKSRYB104K16
C 161		CKSRYB123K25
C 162		CKSRYB123K25
C 171		CEJQ1R0M50
C 172		CEJQ1R0M50
C 173		CKSRYB223K50
C 201		CKSRYB105K10
C 202		CKSRYB105K10
C 203		CKSRYB102K50
C 204		CKSRYB102K50
C 205		CCSRCH221J50
C 206		CCSRCH221J50
C 209		CKSQYB225K10
C 210		CKSQYB225K10
C 213		CKSYB475K10
C 215		CKSRYB105K10
C 216		CKSRYB105K10
C 217		CKSRYB105K10
C 218		CKSRYB105K10
C 219		CKSRYB105K10
C 220		CKSRYB105K10
C 221		CCSRCH221J50
C 222		CCSRCH221J50
C 223		CCSRCH221J50
C 224		CCSRCH221J50
C 225		CCSRCH221J50
C 226		CCSRCH221J50
C 227		CCSRCH151J50
C 228		CCSRCH151J50
C 229		CCSRCH151J50
C 230		CCSRCH151J50
C 231		CCSRCH151J50
C 232		CCSRCH151J50
C 233		CCSRCH151J50
C 234		CCSRCH151J50
C 235		CCSRCH151J50
C 236		CCSRCH151J50

Circuit Symbol and No.	Part Name	Part No.
C 237		CCSRCH151J50
C 238		CCSRCH151J50
C 239		CKSQYB225K10
C 240		CKSQYB225K10
C 241		CKSQYB225K10
C 242		CKSQYB225K10
C 243		CKSQYB225K10
C 244		CKSQYB225K10
C 251		CKSRYB105K10
C 252		CKSRYB105K10
C 253		CKSRYB105K10
C 254		CKSRYB105K10
C 255		CKSRYB105K10
C 256		CKSRYB105K10
C 257		CSZSR100M16
C 258		CSZSR100M16
C 259		CKSYB475K10
C 261		CKSRYB102K50
C 262		CKSRYB102K50
C 263		CKSYB475K10
C 264		CKSRYB104K16
C 265		CKSRYB104K16
C 266		CKSRYB104K16
C 267		CKSRYB104K16
C 268		CKSRYB104K16
C 269		CKSRYB104K16
C 270		CKSRYB104K16
C 271		CCSRCH180J50
C 272		CCSRCH180J50
C 273		CKSRYB104K16
C 274		CKSRYB104K16
C 275		CKSRYB104K16
C 276		CKSRYB104K16
C 277		CKSRYB104K16
C 278		CKSYB475K10
C 279		CEV101M6R3
C 280		CEV221M4
C 281		CKSRYB102K50
C 282		CKSRYB104K16
C 283		CKSRYB104K16
C 284		CKSYB475K10
C 285		CKSRYB104K16
C 286		CKSRYB104K16
C 287		CKSRYB105K10
C 289		CKSRYB103K50
C 290		CKSRYB103K50
C 291		CKSYB106K6R3
C 301		CCSRCH101J50
C 302		CCSRCH101J50
C 303		CCSRCH101J50
C 304		CCSRCH101J50
C 305		CCSRCH101J50
C 306		CCSRCH101J50
C 307		CKSRYB103K50
C 309		CCSRCH101J50
C 310		CCSRCH101J50
C 331		CKSRYB474K10
C 332		CKSRYB474K10
C 333		CKSRYB474K10
C 334		CKSRYB474K10
C 335		CKSRYB474K10
C 336		CKSRYB474K10
C 337		CKSRYB474K10
C 338		CKSRYB474K10
C 339		CEHAR330M10

=====Circuit Symbol and No.		===Part Name	Part No.
C	340	3300µF/16V	CCH1125
C	341		CKSRYB104K16
C	342		CEHAR100M16
C	343		CKSYB225K16
C	344		CKSYB225K16
C	351		CEAL100M16
C	352		CEAL100M16
C	353		CEAL100M16
C	354		CEAL100M16
C	355		CEAL100M16
C	356		CEAL100M16
C	357		CCSRCH221J50
C	358		CCSRCH221J50
C	359		CCSRCH221J50
C	360		CCSRCH221J50
C	361		CCSRCH221J50
C	362		CCSRCH221J50
C	370		CKSRYB105K10
C	371		CKSRYB103K50
C	372		CKSRYB103K50
C	376		CCSRCH7R0D50
C	381		CKSRYB104K16
C	382		CSZSR100M10
C	383		CSZSR100M10
C	384		CKSRYB105K10
C	385		CKSQYB225K10
C	386		CKSQYB225K10
C	387		CKSQYB225K10
C	388		CKSQYB225K10
C	389		CKSRYB105K10
C	390		CKSRYB105K10
C	391		CKSRYB105K10
C	392		CKSRYB104K16
C	393		CKSRYB472K50
C	394		CKSRYB472K50
C	401		CKSRYB182K50
C	403		CKSRYB473K50
C	404		CEJQ101M10
C	405		CKSRYB103K50
C	406		CEJQ220M10
C	407		CKSQYB103K50
C	408		CKSRYB223K50
C	409		CKSRYB223K50
C	411		CKSRYB472K50
C	412		CKSRYB472K50
C	416		CKSRYB473K50
C	420		CCSRCH101J50
C	421		CKSRYB104K16
C	422		CKSRYB104K16
C	423		CKSRYB104K16
C	424		CKSRYB103K50
C	501		CSZSC220M16
C	502		CCSRCH101J50
C	503		CCSRCH270J50
C	504		CCSRCH270J50
C	505		CKSRYB104K16
C	506		CKSRYB471K50
C	507		CKSRYB471K50
C	508		CKSRYB473K50
C	509		CSZSC220M16
C	511		CKSRYB104K16
C	512		CKSRYB104K16
C	515		CCSRCH101J50
C	551		CEAL470M10
C	552		CEAL100M16

=====Circuit Symbol and No.		===Part Name	Part No.
C	553		CEAL100M16
C	554		CKSRYB104K16
C	555		CKSRYB104K16
C	556		CKSRYB104K16
C	557		CKSRYB104K16
C	558		CKSRYB104K16
C	559		CKSRYB105K10
C	560		CKSRYB105K10
C	561		CKSRYB222K50
C	562		CKSRYB222K50
C	563		CKSRYB103K50
C	591		CEJQ100M16
C	592		CKSRYB103K50
C	593		CKSRYB103K50
C	601		CCSRCH220J50
C	602		CCSRCH150J50
C	604		CKSRYB103K50
C	605		CKSYB475K10
C	607		CCSRCH101J50
C	631		CKSRYB103K50
C	632		CKSRYB103K50
C	633		CKSRYB103K50
C	701		CKSYB225K16
C	702		CKSQYB104K16
C	703		CKSYB225K16
C	704		CKSQYB104K16
C	705		CKSQYB104K16
C	706		CKSQYB104K16
C	707		CKSYB225K16
C	708		CEAL101M10
C	709		CKSYB225K16
C	710		CKSRYB104K16
C	731		CKSRYB103K50
C	732		CKSRYB103K50
C	733		CEAL220M16
C	734		CEAL101M10
C	735		CKSRYB104K16
C	736		CKSRYB104K16
C	741		CKSRYB103K50
C	742		CKSRYB103K50
C	743		CEAL470M6R3
C	744		CKSRYB104K16
C	745		CKSRYB104K16
C	747		CKSYB475K10
C	748		CKSRYB103K50
C	749		CEAL470M6R3
C	750		CKSRYB105K10
C	755		CKSRYB104K16
C	761		CKSRYB103K50
C	762		CKSRYB103K50
C	763		CEAL220M16
C	771		CKSRYB103K50
C	772		CKSRYB103K50
C	773		CEAL220M16
C	805		CEJQ470M10
C	807		CKSRYB102K50
C	808		CKSYB475K16
C	809		CKSRYB104K16
C	810		CEJQ470M10
C	811		CKSRYB103K50
C	812		CKSYB475K16
C	814		CKSRYB103K50
C	815		CKSRYB104K16
C	816		CEJQ470M10
C	817		CKSYB475K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	818		CEVQ220M16
C	820		CKSYB475K16
C	827		CKSRYB103K50
C	828		CCSRCH101J50
C	831		CCSRCH470J50
C	832		CCSRCH470J50
C	833		CKSYB475K10
C	835		CKSYB475K10
C	836		CKSYB475K10
C	837		CKSYB475K10
C	838		CKSYB475K10
C	839		CKSRYB105K10
C	840		CKSRYB105K10
C	851		CKSRYB104K16
C	902		CKSRYB102K50
C	903		CKSRYB102K50
C	904		CKSRYB102K50
C	905		CKSRYB102K50
C	906		CKSRYB102K50
C	907		CKSRYB102K50
C	908		CKSRYB102K50
C	909		CKSRYB102K50
C	911		CEHAT102M16
C	912		CKSRYB103K50
C	913		CEAL470M10
C	914		CKSRYB103K50
C	915		CKSRYB103K50
C	916		CEAL470M16
C	917		CKSRYB103K50
C	918	2200µF/16V	CCH1439
C	921		CEALR33M50
C	922		CEAL470M10
C	923		CKSRYB103K50
C	931		CKSYB105K16
C	933		CKSRYB103K50
C	961		CKSRYB102K50
C	962		CKSRYB104K16
C	963		CEJQ2R2M50
C	971		CKSRYB104K16
C	972		CKSYB106K6R3
C	973		CKSRYB103K50
C	974		CKSRYB103K50
C	975		CEVQ220M16
C	976		CKSRYB103K50
C	977		CKSYB475K16
C	978		CKSRYB103K50
C	979		CEAL470M16
C	980		CKSRYB103K50
C	981		CEAL220M16
C	982		CEALR33M50
C	991		CEAL220M16

A Unit Number : CWM7825(DEH-P900HDD/ES)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC	101	IC	HA12187FP
IC	141	IC	NJM2068MD
IC	142	IC	NJM2068MD
IC	201	IC	NJM2068MD
IC	202	IC	NJM2068MD
IC	203	IC	NJM2068MD
IC	204	IC	NJM2068MD
IC	205	IC	PDG262A
IC	206	IC	TC7WH34FU
IC	291	IC	PD5704A

=====Circuit Symbol and No.		===Part Name	Part No.
IC	301	IC	PAL006A
IC	371	IC	TC74VHC126FT
IC	372	IC	TC7SH08FU
IC	373	IC	TC7SH08FU
IC	381	IC	PML011A
IC	551	IC	AK4321VF
IC	552	IC	TC7SET08FU
IC	601	IC	PD5646A
IC	602	IC	TC7S32FU
IC	731	IC	NJU7223DL1-33
IC	741	IC	NJM2870F18
IC	742	IC	NJU7223DL1-33
IC	831	IC	NJM2068MD
IC	911	IC	TC7SET32FU
IC	931	IC	TC7S08FU
IC	961	IC	S-80735ANDZI
IC	971	IC	BA033FP
Q	101	Transistor	2SA1162
Q	102	Transistor	DTC124EU
Q	131	Transistor	2SC2412K
Q	132	Transistor	IMD2A
Q	133	Transistor	2SC2412K
Q	331	Transistor	DTC124EU
Q	332	Transistor	DTC124EU
Q	351	Transistor	IMH3A
Q	352	Transistor	IMH3A
Q	353	Transistor	IMH3A
Q	371	Transistor	IMD2A
Q	381	Transistor	DTC124EU
Q	401	Transistor	2SC2412K
Q	591	Transistor	2SD1859
Q	592	Transistor	IMD2A
Q	761	Transistor	2SB1238
Q	762	Transistor	DTC143EU
Q	771	Transistor	IMD2A
Q	801	Transistor	2SD1760F5
Q	802	Transistor	IMD2A
Q	806	Transistor	2SD1859
Q	807	Transistor	IMD2A
Q	831	Transistor	DTC314TU
Q	832	Transistor	DTC314TU
Q	833	Transistor	IMD2A
Q	851	Transistor	IMD2A
Q	852	Transistor	2SC2412K
Q	853	Transistor	2SD1859
Q	911	Transistor	2SD1760F5
Q	912	Transistor	IMD2A
Q	913	Transistor	2SD2396
Q	914	Transistor	IMD2A
Q	921	Transistor	2SD2396
Q	922	Transistor	IMD2A
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EK
Q	951	Transistor	2SA1162
Q	962	Transistor	2SC2412K
Q	971	Transistor	2SB1238
Q	972	Transistor	DTC114EU
Q	973	Transistor	IMD2A
Q	991	Transistor	2SC2412K
Q	992	Transistor	2SC2412K
Q	993	Transistor	IMD2A
Q	994	Transistor	IMD2A
D	131	Diode	MA3039(L)
D	141	Diode	UDZS3R9(B)
D	142	Diode	RB706F-40

Circuit Symbol and No.		Part Name	Part No.
D	381	Diode	DAN202U
D	591	Diode	HZS12L(A1)
D	801	Diode Network	DA204U
D	802	Diode Network	DA204U
D	803	Diode Network	DA204U
D	804	Diode Network	DA204U
D	805	Diode	MA3062(M)
D	806	Diode	HZS6L(B1)
D	811	Diode Network	DA204U
D	812	Diode Network	DA204U
D	813	Diode	HZS11L(A1)
D	814	Diode Network	DA204U
D	815	Diode Network	DA204U
D	851	Diode	HZS9L(A2)
D	901	Diode	MPG06G-6415G50
D	902	Diode	MPG06G-6415G50
D	903	Diode	MPG06G-6415G50
D	904	Diode	MPG06G-6415G50
D	911	Diode	MPG06G-6415G50
D	912	Diode	HZS6L(B1)
D	913	Diode	MPG06G-6415G50
D	914	Diode	HZS9L(B1)
D	921	Diode	HZS6L(C2)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	933	Diode	MPG06G-6415G50
D	951	Diode	DAN202U
D	961	Diode	MA152K
D	971	Diode	IMN10
D	991	Diode	DAN202U
D	992	Diode	HZS9L(A2)
D	993	Diode	1SS133
D	994	Diode	DAN202U
ZNR	451	Surge Protector	DSPS-201M-S00B
L	101	Inductor	LAU3R3K
L	102	Inductor	CTF1399
L	131	Inductor	CTF1399
L	132	Inductor	CTF1399
L	133	Inductor	CTF1399
L	134	Inductor	CTF1399
L	201	Inductor	CTF1379
L	202	Inductor	CTF1379
L	215	Inductor	CTF1379
L	216	Inductor	CTF1379
L	217	Inductor	CTF1379
L	218	Inductor	CTF1379
L	219	Inductor	CTF1379
L	220	Inductor	CTF1379
L	261	Inductor	CTF1379
L	262	Ferri-Inductor	LAU101K
L	263	Ferri-Inductor	LAU151K
L	291	Inductor	CTF1399
L	361	Filter	CTF1071
L	371	Inductor	CTF1379
L	372	Inductor	CTF1379
L	376	Inductor	LCYC4R7K1608
L	377	Inductor	CTF1357
L	401	Inductor	LAU100K
L	402	Inductor	LCTB4R7K2125
L	404	Ferri-Inductor	LAU2R2K
L	405	Inductor	CTF1399
L	491	Inductor	CTF1399
L	551	Ferri-Inductor	LAU2R2K
L	601	Inductor	LAU100K
L	701	Inductor	CTF1379

Circuit Symbol and No.		Part Name	Part No.
L	731	Inductor	CTF1484
L	741	Ferri-Inductor	LAU2R2K
L	742	Inductor	LAU1R0K
L	761	Inductor	LAU100K
L	771	Inductor	LAU100K
L	801	Inductor	LAU100K
L	802	Inductor	CTF1489
L	803	Inductor	CTF1488
L	804	Inductor	CTF1488
L	951	Ferri-Inductor	LAU2R2K
L	971	Ferri-Inductor	LAU2R2K
L	972	Inductor	LAU1R0K
L	973	Ferri-Inductor	LAU2R2K
X	261	Radiator 16.9344MHz	CSS1463
X	291	Radiator 10.00MHz	CSS1428
X	601	Radiator 10.00MHz	CSS1475
VR	141	Semi-fixed 10kΩ(B)	CCP1448
FU	701	Fuse 3.15A	CEK1207
MIC	141	Microphone	CPM1011
		FM/AM Tuner Unit	CWE1605
BZ	641	Buzzer	CPV1050
		Fan Motor	CXM1186

RESISTORS

R	101		RS1/16S101J
R	102		RS1/16S620J
R	103		RS1/16S101J
R	104		RS1/16S222J
R	105		RS1/16S103J
R	106		RS1/16S562J
R	107		RS1/16S332J
R	108		RS1/16S181J
R	109		RS1/16S181J
R	110		RS1/16S223J
R	111		RS1/16S223J
R	112		RS1/16S102J
R	113		RS1/16S102J
R	131		RS1/16S104J
R	132		RS1/16S222J
R	133		RS1/16S103J
R	134		RS1/16S561J
R	135		RS1/16S223J
R	136		RS1/16S473J
R	137		RS1/16S153J
R	138		RS1/16S683J
R	139		RS1/16S152J
R	140		RS1/16S682J
R	141		RS1/16S222J
R	142		RS1/16S152J
R	143		RS1/16S152J
R	144		RS1/16S104J
R	145		RS1/16S101J
R	146		RS1/16S563J
R	147		RS1/16S102J
R	148		RS1/16S103J
R	149		RS1/16S103J
R	150		RS1/16S153J
R	151		RS1/16S153J
R	152		RS1/16S223J
R	153		RN1/16SE4702D
R	154		RN1/16SE4702D
R	160		RS1/16S473J
R	161		RS1/16S272J
R	162		RS1/16S272J

=====Circuit Symbol and No.	===Part Name	Part No.
R 163		RS1/16S162J
R 164		RS1/16S162J
R 171		RS1/16S0R0J
R 172		RS1/16S0R0J
R 201		RS1/16S474J
R 202		RS1/16S474J
R 203		RS1/16S223J
R 204		RS1/16S223J
R 205		RS1/16S472J
R 206		RS1/16S472J
R 207		RS1/16S225J
R 208		RS1/16S155J
R 215		RS1/16S474J
R 216		RS1/16S474J
R 217		RS1/16S474J
R 218		RS1/16S474J
R 219		RS1/16S474J
R 220		RS1/16S474J
R 221		RS1/16S222J
R 222		RS1/16S222J
R 223		RS1/16S222J
R 224		RS1/16S222J
R 225		RS1/16S222J
R 226		RS1/16S222J
R 227		RS1/16S333J
R 228		RS1/16S333J
R 229		RS1/16S333J
R 230		RS1/16S333J
R 231		RS1/16S333J
R 232		RS1/16S333J
R 233		RS1/16S273J
R 234		RS1/16S273J
R 235		RS1/16S273J
R 236		RS1/16S273J
R 237		RS1/16S273J
R 238		RS1/16S273J
R 239		RS1/16S183J
R 240		RS1/16S183J
R 241		RS1/16S183J
R 242		RS1/16S183J
R 243		RS1/16S183J
R 244		RS1/16S183J
R 245		RS1/16S273J
R 246		RS1/16S273J
R 247		RS1/16S273J
R 248		RS1/16S273J
R 249		RS1/16S273J
R 250		RS1/16S273J
R 251		RS1/16S103J
R 252		RS1/16S103J
R 253		RS1/16S103J
R 254		RS1/16S103J
R 261		RS1/16S331J
R 262		RAB4C221J
R 263		RS1/16S221J
R 264		RS1/16S221J
R 265		RS1/16S221J
R 266		RS1/16S102J
R 267		RS1/16S221J
R 282		RS1/16S103J
R 283		RS1/16S103J
R 284		RS1/16S153J
R 291		RAB4C681J
R 292		RS1/16S473J
R 293		RS1/16S102J

=====Circuit Symbol and No.	===Part Name	Part No.
R 294		RS1/16S473J
R 295		RS1/16S102J
R 296		RS1/16S105J
R 297		RS1/16S102J
R 298		RS1/16S471J
R 299		RS1/16S102J
R 300		RAB4C473J
R 301		RAB4C681J
R 302		RS1/16S222J
R 303		RS1/16S104J
R 304		RAB4C471J
R 305		RS1/16S473J
R 306		RS1/16S102J
R 307		RS1/16S102J
R 308		RS1/16S473J
R 309		RS1/16S102J
R 310		RS1/16S102J
R 312		RS1/16S104J
R 313		RS1/16S222J
R 314		RS1/16S222J
R 315		RS1/16S473J
R 316		RAB4C0R0J
R 317		RS1/16S102J
R 318		RS1/16S473J
R 321		RS1/16S472J
R 322		RS1/16S104J
R 325		RS1/16S102J
R 326		RS1/16S0R0J
R 327		RS1/16S473J
R 328		RS1/16S473J
R 329		RAB4C681J
R 331		RS1/16S103J
R 332		RS1/16S103J
R 333		RS1/16S103J
R 334		RS1/16S331J
R 351		RS1/16S821J
R 352		RS1/16S821J
R 353		RS1/16S821J
R 354		RS1/16S821J
R 355		RS1/16S821J
R 356		RS1/16S821J
R 357		RS1/16S223J
R 358		RS1/16S223J
R 359		RS1/16S223J
R 360		RS1/16S223J
R 361		RS1/16S223J
R 362		RS1/16S223J
R 366		RS1/16S101J
R 367		RS1/16S0R0J
R 369		RS1/16S0R0J
R 371		RS1/16S102J
R 372		RS1/16S102J
R 373		RS1/16S102J
R 374		RS1/16S102J
R 375		RS1/16S102J
R 376		RS1/16S102J
R 377		RS1/16S102J
R 378		RS1/16S102J
R 379		RS1/16S221J
R 380		RS1/16S221J
R 381		RS1/16S682J
R 385		RS1/10S0R0J
R 401		RS1/16S473J
R 402		RS1/16S473J
R 403		RS1/16S681J

Circuit Symbol and No.	Part Name	Part No.
R 404		RS1/16S681J
R 409		RS1/16S681J
R 410		RS1/16S103J
R 411		RS1/16S681J
R 412		RS1/16S681J
R 413		RS1/16S681J
R 414		RS1/16S473J
R 415		RS1/16S472J
R 416		RS1/16S473J
R 417		RS1/16S473J
R 418		RS1/16S473J
R 419		RS1/16S222J
R 420		RS1/16S222J
R 423		RS1/16S0R0J
R 424		RS1/16S393J
R 430		RS1/16S0R0J
R 431		RS1/16S0R0J
R 507		RS1/16S0R0J
R 551		RS1/16S222J
R 552		RS1/16S102J
R 553		RS1/16S102J
R 554		RS1/16S102J
R 555		RS1/16S222J
R 556		RS1/16S222J
R 557		RS1/16S222J
R 558		RS1/16S681J
R 559		RS1/16S681J
R 560		RS1/16S332J
R 561		RS1/16S332J
R 562		RS1/16S332J
R 563		RS1/16S332J
R 564		RS1/16S101J
R 565		RS1/16S101J
R 591		RS1/10S1R0J
R 592		RS1/16S102J
R 593		RS1/16S102J
R 601		RS1/16S473J
R 602		RS1/16S102J
R 603		RS1/16S473J
R 604		RS1/16S472J
R 605		RS1/16S221J
R 606		RS1/16S682J
R 607		RS1/16S221J
R 608		RS1/16S682J
R 609		RS1/16S102J
R 610		RS1/16S102J
R 613		RS1/16S473J
R 615		RS1/16S221J
R 616		RS1/16S682J
R 617		RS1/16S221J
R 618		RS1/16S682J
R 619		RS1/16S221J
R 620		RS1/16S473J
R 621		RS1/16S221J
R 622		RS1/16S682J
R 623		RS1/16S102J
R 624		RS1/16S473J
R 625		RS1/16S473J
R 626		RS1/16S473J
R 631		RS1/16S473J
R 632		RS1/16S0R0J
R 633		RS1/16S0R0J
R 634		RS1/16S0R0J
R 635		RS1/16S0R0J
R 636		RS1/16S0R0J
R 637		RS1/16S473J
R 639		RS1/16S473J
R 641		RS1/16S102J
R 651		RS1/16S473J
R 701		RS1/10S102J
R 702		RS1/10S102J
R 703		RS1/10S102J
R 704		RS1/10S102J
R 705		RS1/10S102J
R 706		RS1/10S0R0J
R 761		RS1/16S472J
R 762		RS1/16S102J
R 801		RS1/10S222J
R 802		RS1/10S222J
R 803		RS1/10S222J
R 804		RS1/10S103J
R 805		RS1/10S472J
R 810		RS1/16S221J
R 811		RS1/16S221J
R 812		RS1/16S821J
R 813		RS1/16S681J
R 817		RS1/16S473J
R 820		RS1/10S1R0J
R 823		RS1/10S222J
R 824		RS1/10S222J
R 825		RS1/10S221J
R 826		RS1/10S221J
R 831		RS1/16S102J
R 832		RS1/16S102J
R 833		RS1/16S333J
R 834		RS1/16S333J
R 835		RS1/16S473J
R 836		RS1/16S473J
R 837		RS1/16S223J
R 838		RS1/16S223J
R 839		RS1/16S102J
R 840		RS1/16S102J
R 851		RS1/16S182J
R 855		RS1/16S560J
R 856		RS1/16S222J
R 857		RS1/16S222J
R 858		RS1/16S222J
R 859		RS1/16S102J
R 912		RS1/16S562J
R 913		RS1/16S101J
R 914		RS1/10S0R0J
R 915		RS1/16S123J
R 916		RS1/16S471J
R 921		RS1/16S681J
R 922		RS1/16S561J
R 931		RS1/10S472J
R 932		RS1/16S473J
R 933		RS1/16S103J
R 934		RS1/16S473J
R 935		RS1/16S104J
R 936		RS1/16S103J
R 937		RS1/16S473J
R 938		RS1/16S102J
R 951		RS1/10S153J
R 952		RS1/16S472J
R 953		RS1/16S472J
R 954		RS1/16S102J
R 961		RS1/16S102J
R 962		RS1/16S102J
R 963		RS1/16S473J

Circuit Symbol and No.	Part Name	Part No.
R 964		RS1/16S822J
R 965		RS1/16S102J
R 971		RS1/16S472J
R 972		RS1/16S102J
R 973		RS1/16S473J
R 974		RS1/16S473J
R 975		RS1/16S473J
R 976		RS1/16S0R0J
R 987		RS1/16S101J
R 991		RS1/16S223J
R 992		RS1/16S473J
R 993		RS1/16S104J
R 994		RS1/16S473J
R 995		RS1/16S224J
R 996		RS1/16S473J
R 997		RS1/16S102J
CAPACITORS		
C 101		CKSRYB104K16
C 102		CKSRYB104K16
C 103		CKSRYB104K16
C 131		CKSRYB681K50
C 132		CEAL101M10
C 133		CKSQYB225K10
C 141		CEJQ470M10
C 142		CKSRYB105K10
C 143		CKSRYB105K10
C 144		CCSRCH101J50
C 145		CKSYB475K16
C 146		CKSRYB105K10
C 147		CKSRYB104K16
C 148		CKSYB475K16
C 149		CKSRYB474K10
C 150		CKSRYB105K10
C 151		CKSRYB104K16
C 152		CKSYB106K6R3
C 153		CKSRYB104K16
C 161		CKSRYB183K25
C 162		CKSRYB183K25
C 201		CKSRYB105K10
C 202		CKSRYB105K10
C 203		CKSRYB102K50
C 204		CKSRYB102K50
C 205		CCSRCH221J50
C 206		CCSRCH221J50
C 209		CKSQYB225K10
C 210		CKSQYB225K10
C 213		CKSYB475K10
C 215		CKSRYB105K10
C 216		CKSRYB105K10
C 217		CKSRYB105K10
C 218		CKSRYB105K10
C 219		CKSRYB105K10
C 220		CKSRYB105K10
C 221		CCSRCH221J50
C 222		CCSRCH221J50
C 223		CCSRCH221J50
C 224		CCSRCH221J50
C 225		CCSRCH221J50
C 226		CCSRCH221J50
C 227		CCSRCH151J50
C 228		CCSRCH151J50
C 229		CCSRCH151J50

Circuit Symbol and No.	Part Name	Part No.
C 230		CCSRCH151J50
C 231		CCSRCH151J50
C 232		CCSRCH151J50
C 233		CCSRCH151J50
C 234		CCSRCH151J50
C 235		CCSRCH151J50
C 236		CCSRCH151J50
C 237		CCSRCH151J50
C 238		CCSRCH151J50
C 239		CKSQYB225K10
C 240		CKSQYB225K10
C 241		CKSQYB225K10
C 242		CKSQYB225K10
C 243		CKSQYB225K10
C 244		CKSQYB225K10
C 251		CKSRYB105K10
C 252		CKSRYB105K10
C 253		CKSRYB105K10
C 254		CKSRYB105K10
C 255		CKSRYB105K10
C 256		CKSRYB105K10
C 257		CSZSR100M16
C 258		CSZSR100M16
C 259		CKSYB475K10
C 261		CKSRYB102K50
C 262		CKSRYB102K50
C 263		CKSYB475K10
C 264		CKSRYB104K16
C 265		CKSRYB104K16
C 266		CKSRYB104K16
C 267		CKSRYB104K16
C 268		CKSRYB104K16
C 269		CKSRYB104K16
C 270		CKSRYB104K16
C 271		CCSRCH180J50
C 272		CCSRCH180J50
C 273		CKSRYB104K16
C 274		CKSRYB104K16
C 275		CKSRYB104K16
C 276		CKSRYB104K16
C 277		CKSRYB104K16
C 278		CKSYB475K10
C 279		CEV101M6R3
C 280		CEV221M4
C 281		CKSRYB102K50
C 282		CKSRYB104K16
C 283		CKSRYB104K16
C 284		CKSYB475K10
C 285		CKSRYB104K16
C 286		CKSRYB104K16
C 287		CKSRYB105K10
C 289		CKSRYB103K50
C 290		CKSRYB103K50
C 291		CKSYB106K6R3
C 301		CCSRCH101J50
C 302		CCSRCH101J50
C 303		CCSRCH101J50
C 304		CCSRCH101J50
C 305		CCSRCH101J50
C 306		CCSRCH101J50
C 307		CKSRYB103K50
C 309		CCSRCH101J50
C 310		CCSRCH101J50
C 331		CKSRYB474K10
C 332		CKSRYB474K10

=====Circuit Symbol and No.		===Part Name	Part No.
C	333		CKSRYB474K10
C	334		CKSRYB474K10
C	335		CKSRYB474K10
C	336		CKSRYB474K10
C	337		CKSRYB474K10
C	338		CKSRYB474K10
C	339		CEHAR330M10
C	340	3300µF/16V	CCH1125
C	341		CKSRYB104K16
C	342		CEHAR100M16
C	343		CKSYB225K16
C	344		CKSYB225K16
C	351		CEAL100M16
C	352		CEAL100M16
C	353		CEAL100M16
C	354		CEAL100M16
C	355		CEAL100M16
C	356		CEAL100M16
C	357		CCSRCH221J50
C	358		CCSRCH221J50
C	359		CCSRCH221J50
C	360		CCSRCH221J50
C	361		CCSRCH221J50
C	362		CCSRCH221J50
C	370		CKSRYB105K10
C	371		CKSRYB103K50
C	372		CKSRYB103K50
C	376		CCSRCH7R0D50
C	381		CKSRYB104K16
C	382		CSZSR100M10
C	383		CSZSR100M10
C	384		CKSRYB105K10
C	385		CKSQYB225K10
C	386		CKSQYB225K10
C	387		CKSQYB225K10
C	388		CKSQYB225K10
C	389		CKSRYB105K10
C	390		CKSRYB105K10
C	391		CKSRYB105K10
C	392		CKSRYB104K16
C	393		CKSRYB472K50
C	394		CKSRYB472K50
C	403		CKSRYB473K50
C	404		CEJQ101M10
C	405		CKSRYB103K50
C	406		CEJQ220M10
C	407		CKSQYB103K50
C	408		CKSRYB223K50
C	409		CKSRYB223K50
C	411		CKSRYB472K50
C	416		CKSRYB473K50
C	420		CCSRCH101J50
C	421		CKSRYB104K16
C	422		CKSRYB104K16
C	423		CKSRYB104K16
C	424		CKSRYB103K50
C	512		CKSRYB104K16
C	551		CEAL470M10
C	552		CEAL100M16
C	553		CEAL100M16
C	554		CKSRYB104K16
C	555		CKSRYB104K16
C	556		CKSRYB104K16
C	557		CKSRYB104K16
C	558		CKSRYB104K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	559		CKSRYB105K10
C	560		CKSRYB105K10
C	561		CKSRYB222K50
C	562		CKSRYB222K50
C	563		CKSRYB103K50
C	591		CEJQ100M16
C	592		CKSRYB103K50
C	593		CKSRYB103K50
C	601		CCSRCH220J50
C	602		CCSRCH150J50
C	604		CKSRYB103K50
C	605		CKSYB475K10
C	607		CCSRCH101J50
C	631		CKSRYB103K50
C	632		CKSRYB103K50
C	633		CKSRYB103K50
C	701		CKSYB225K16
C	702		CKSQYB104K16
C	703		CKSYB225K16
C	704		CKSQYB104K16
C	705		CKSQYB104K16
C	706		CKSQYB104K16
C	707		CKSYB225K16
C	708		CEAL101M10
C	709		CKSYB225K16
C	710		CKSRYB104K16
C	731		CKSRYB103K50
C	732		CKSRYB103K50
C	733		CEAL220M16
C	734		CEAL101M10
C	735		CKSRYB104K16
C	736		CKSRYB104K16
C	741		CKSRYB103K50
C	742		CKSRYB103K50
C	743		CEAL470M6R3
C	744		CKSRYB104K16
C	745		CKSRYB104K16
C	747		CKSYB475K10
C	748		CKSRYB103K50
C	749		CEAL470M6R3
C	750		CKSRYB105K10
C	755		CKSRYB104K16
C	761		CKSRYB103K50
C	762		CKSRYB103K50
C	763		CEAL220M16
C	771		CKSRYB103K50
C	772		CKSRYB103K50
C	773		CEAL220M16
C	805		CEJQ470M10
C	807		CKSRYB102K50
C	808		CKSYB475K16
C	809		CKSRYB104K16
C	810		CEJQ470M10
C	811		CKSRYB103K50
C	812		CKSYB475K16
C	814		CKSRYB103K50
C	815		CKSRYB104K16
C	816		CEJQ470M10
C	817		CKSYB475K16
C	818		CEVQ220M16
C	820		CKSYB475K16
C	827		CKSRYB103K50
C	828		CCSRCH101J50
C	831		CCSRCH470J50
C	832		CCSRCH470J50

Circuit Symbol and No.		Part Name	Part No.
C	833		CKSYB475K10
C	835		CKSYB475K10
C	836		CKSYB475K10
C	837		CKSYB475K10
C	838		CKSYB475K10
C	839		CKSRYB105K10
C	840		CKSRYB105K10
C	851		CKSRYB104K16
C	902		CKSRYB102K50
C	903		CKSRYB102K50
C	904		CKSRYB102K50
C	905		CKSRYB102K50
C	906		CKSRYB102K50
C	907		CKSRYB102K50
C	908		CKSRYB102K50
C	909		CKSRYB102K50
C	911		CEHAT102M16
C	912		CKSRYB103K50
C	913		CEAL470M10
C	914		CKSRYB103K50
C	915		CKSRYB103K50
C	916		CEAL470M16
C	917		CKSRYB103K50
C	918	2200µF/16V	CCH1439
C	921		CEALR33M50
C	922		CEAL470M10
C	923		CKSRYB103K50
C	931		CKSYB105K16
C	933		CKSRYB103K50
C	961		CKSRYB102K50
C	962		CKSRYB104K16
C	963		CEJQ2R2M50
C	971		CKSRYB104K16
C	972		CKSYB106K6R3
C	973		CKSRYB103K50
C	974		CKSRYB103K50
C	975		CEVQ220M16
C	976		CKSRYB103K50
C	977		CKSYB475K16
C	978		CKSRYB103K50
C	979		CEAL470M16
C	980		CKSRYB103K50
C	981		CEAL220M16
C	982		CEALR33M50
C	991		CEAL220M16

B Unit Number : CWM7664
Unit Name : Keyboard Unit

MISCELLANEOUS

IC	1901		RS-140
IC	1902	IC	PD5658A
IC	1903	IC	S-80734ANDYI
IC	1905	IC	PD8081A
IC	1906	IC	PD6364A
IC	1907	IC	PD3428A
Q	1901	Transistor	IMD2A
Q	1902	Transistor	IMD2A
Q	1903	Transistor	2SC4081
Q	1904	Transistor	2SC4081
D	1901	Diode	DAP202U
D	1902	Diode	DAN202U
D	1905	Diode	MA111
D	1906	Diode	DAN202U
D	1907	Diode	UDZS13(B)

Circuit Symbol and No.		Part Name	Part No.
D	1908	Diode	UDZS3R9(B)
D	1909	LED	CL170UBX
D	1910	LED	CL170UBX
D	1911	LED	CL170UBX
D	1912	LED	CL170UBX
D	1913	LED	CL170UBX
D	1914	LED	CL170UBX
D	1915	LED	CL170UBX
D	1916	LED	CL170UBX
D	1917	LED	CL170UBX
D	1918	LED	CL170UBX
D	1919	LED	CL170UBX
L	1901	Inductor	CTF1295
L	1902	Inductor	CTF1484
L	1903	Inductor	CTF1305
L	1904	Inductor	CTF1399
L	1905	Inductor	CTF1399
L	1906	Inductor	CTF1399
L	1907	Inductor-Array	CTF1421
L	1908	Inductor-Array	CTF1421
L	1909	Inductor-Array	CTF1421
L	1910	Inductor-Array	CTF1421
L	1911	Inductor	CTF1399
L	1912	Inductor	CTF1530
L	1913	Inductor-Array	CTF1421
L	1914	Inductor-Array	CTF1421
L	1915	Inductor-Array	CTF1421
L	1916	Inductor-Array	CTF1421
L	1917	Inductor-Array	CTF1421
L	1918	Inductor-Array	CTF1421
L	1919	Inductor-Array	CTF1421
L	1920	Inductor-Array	CTF1421
L	1921	Inductor	CTF1379
L	1922	Inductor	CTF1399
L	1923	Inductor	CTF1399
L	1924	Inductor	CTF1379
L	1925	Inductor	CTF1379
X	1901	Ceramic Resonator 20MHz	CSS1491
S	1901	Push Switch	CSG1111
S	1902	Push Switch	CSG1111
S	1903	Push Switch	CSG1111
S	1904	Push Switch	CSG1111
S	1905	Push Switch	CSG1111
S	1906	Push Switch	CSG1111
S	1907	Push Switch	CSG1111
S	1908	Push Switch	CSG1111
S	1909	Push Switch	CSG1111
S	1910	Push Switch	CSG1111
S	1911	Push Switch	CSG1111
S	1912	Push Switch	CSG1111
S	1913	Push Switch	CSG1111
S	1914	Push Switch	CSG1111
S	1915	Push Switch	CSG1135
S	1916	Push Switch	CSG1145
S	1917	Push Switch	CSG1111
S	1918	Encoder	CSD1059

RESISTORS

R	1901	RS1/16S222J
R	1902	RS1/16S222J
R	1905	RS1/16S103J
R	1906	RS1/16S121J
R	1907	RS1/16S2R2J
R	1908	RS1/16S222J
R	1913	RAB4C102J
R	1914	RS1/16S473J
R	1915	RS1/16S473J
R	1916	RS1/16S102J

=====Circuit Symbol and No.	===Part Name	Part No.
R 1917		RS1/16S104J
R 1918		RS1/16S0R0J
R 1919		RS1/16S101J
R 1920		RS1/16S101J
R 1923		RS1/16S101J
R 1924		RS1/16S473J
R 1925		RS1/16S101J
R 1927		RS1/16S101J
R 1933		RAB4C102J
R 1934		RAB4C473J
R 1936		RS1/16S473J
R 1937		RS1/16S473J
R 1938		RS1/16S473J
R 1939		RS1/16S473J
R 1940		RS1/16S102J
R 1941		RS1/16S221J
R 1942		RS1/16S223J
R 1943		RS1/16S223J
R 1945		RS1/16S470J
R 1947		RS1/16S470J
R 1949		RS1/16S470J
R 1950		RS1/16S391J
R 1951		RS1/16S470J
R 1952		RS1/16S470J
R 1953		RS1/16S391J
R 1955		RS1/16S470J
R 1960		RS1/16S560J
R 1961		RS1/16S560J
R 1962		RS1/16S560J
R 1963		RS1/16S560J
R 1964		RS1/16S560J
R 1965		RS1/16S391J
R 1966		RS1/16S391J
R 1967		RS1/16S560J
R 1968		RS1/16S0R0J
R 1969		RS1/16S221J
R 1970		RS1/16S221J
R 1971		RS1/16S473J
R 1972		RS1/16S0R0J

CAPACITORS

C 1901		CSZSR100M10
C 1902		CKSRYB105K10
C 1904		CSZSR100M10
C 1906	4.7µF	CCG1111
C 1908		CSZSR100M16
C 1909		CKSRYB105K10
C 1910		CKSRYB103K50
C 1911		CKSRYB104K16
C 1914		CKSRYB103K50
C 1915		CKSRYB103K50
C 1917		CSZSR100M10
C 1918		CKSRYB103K50
C 1919		CKSRYB104K16
C 1920		CKSRYB103K50
C 1921		CSZSR100M16
C 1922		CKSRYB103K50
C 1923		CSZSR100M10
C 1924		CCSRCH101J50
C 1926		CSZSR100M10
C 1931		CKSRYB104K16
C 1932		CKSRYB104K16
C 1933		CKSRYB104K16
C 1934		CKSRYB104K16
C 1935		CKSRYB104K16
C 1936		CKSRYB104K16

=====Circuit Symbol and No.	===Part Name	Part No.
C 1937		CKSRYB104K16
C 1938		CKSRYB104K16
C 1939		CKSRYB104K16
C 1940		CKSRYB104K16
C 1941		CKSRYB104K16
C 1943		CKSRYB104K16
C 1945		CKSRYB104K16
C 1946		CCSRCH101J50
C 1947		CCSRCH101J50
C 1948		CCSRCH101J50
C 1949		CKSRYB103K50
C 1950		CCSRCH220J50
C 1954		CKSRYB103K50
C 1955		CCSRCH101J50
C 1957		CCSRCH101J50
C 1961		CCSRCH101J50
C 1962		CCSRCH101J50
C 1963		CCSRCH101J50

C Unit Number : CWM7665
Unit Name : Power Supply Unit

MISCELLANEOUS

IC	2831	IC	NJM7805FA
Q	2801	Transistor	2SD2396
Q	2802	Transistor	IMD2A
Q	2811	Transistor	2SD2396
Q	2812	Transistor	2SB1238
Q	2813	Transistor	DTC114EK
Q	2821	Transistor	2SD2396
Q	2822	Transistor	IMD2A
Q	2841	Transistor	2SD2396
Q	2842	Transistor	IMD2A
D	2801	Diode	HZS9L(C3)
D	2811	Diode	HZS9L(B3)
D	2821	Diode	HZS9L(B1)
D	2841	Diode	HZS9L(C3)
FU	2801	Fuse 800mA	CEK1206
FU	2811	Fuse 800mA	CEK1206
FU	2821	Fuse 2A	CEK1190

RESISTORS

R 2801		RS1/16S102J
R 2802		RD1/4PU681J
R 2811		RS1/16S102J
R 2812		RS1/16S223J
R 2813		RD1/4PU272J
R 2814		RS1/16S561J
R 2815		RS1/16S471J
R 2816		RD1/4PU221J
R 2821		RS1/16S102J
R 2822		RD1/4PU221J
R 2823		RD1/4PU221J
R 2841		RD1/4PU221J
R 2842		RS1/16S102J

CAPACITORS

C 2801		CKSRYB103K50
C 2803		CKSRYB473K50
C 2804		CEJQ470M16
C 2811		CKSRYB103K50
C 2812		CEJQ101M16
C 2813		CKSRYB103K50
C 2814	330µF/10V	CCH1181
C 2821		CKSRYB103K50
C 2823		CKSRYB473K50
C 2824		CEJQ101M16

=====Circuit Symbol and No.		===Part Name	Part No.
C	2831		CKSRYB104K16
C	2832	330µF/10V	CCH1181
C	2834	330µF/10V	CCH1181
C	2841		CKSRYB473K50
C	2842		CKSRYB103K50
C	2850	470µF/16V	CCH1331

D Unit Number : CWM7667
Unit Name : Digital Unit

MISCELLANEOUS

IC	3001	IC	PE5218C
IC	3002	IC	TC55V16100FTI-15
IC	3003	IC	TC7S08FU
IC	3004	IC	S-80818ANUP-EDF
IC	3005	IC	TC7SH08FU
IC	3006	IC	TC74LVXC3245FS
IC	3007	IC	TC7SET32FU
IC	3008	IC	TC7SET32FU
IC	3009	IC	TC7SET32FU
IC	3010	IC	TC74VHCT125AFT
IC	3011	IC	TC7WH34FU
IC	3101	IC	TC7SH08FU
IC	3102	IC	TC74LVXC3245FS
IC	3103	IC	TC74VHC126FT
IC	3104	IC	TC74VHC125FT
IC	3105	IC	LC78683ES
IC	3106	IC	MSM51V16165DSL-50
IC	3107	IC	TC7SH08FU
IC	3108	IC	TC7SH08FU
IC	3201	IC	TC7S08FU
IC	3202	IC	TC7SH04FU
IC	3203	IC	TC74VHC541FT
IC	3204	IC	TC7W00FU
IC	3205	IC	TC7WH04FU
IC	3206	IC	TC74LCXR163245FT
IC	3301	IC	AK5353VT
IC	3303	IC	TC74VHC157FT
IC	3304	IC	CXD1859AR
IC	3305	IC	CXK2000EN
IC	3306	IC	TC7SH04FU
IC	3307	IC	TC74VHC126FT
IC	3308	IC	TC7SH32FU
Q	3001	Transistor	UMD2N
Q	3101	Transistor	UMD2N
Q	3301	Transistor	DTA123JK
Q	3302	Transistor	DTC124EK
L	3001	Inductor	CTF1399
L	3002	Inductor	CTF1473
L	3012	Inductor	CTF1399
L	3013	Inductor	CTF1379
L	3014	Inductor	CTF1379
L	3015	Inductor	CTF1379
L	3016	Inductor	CTF1379
L	3103	Inductor	CTF1379
L	3104	Inductor	CTF1379
L	3105	Inductor	CTF1379
L	3106	Inductor	CTF1379
L	3107	Inductor	CTF1379
L	3108	Inductor	CTF1379
L	3109	Inductor	CTF1379
L	3110	Inductor	CTF1379
L	3111	Inductor	LCYC4R7K1608
L	3201	Inductor	CTF1379
L	3202	Inductor	CTF1379
L	3203	Inductor	CTF1379

=====Circuit Symbol and No.		===Part Name	Part No.
L	3301	Inductor	CTF1379
L	3302	Inductor	CTF1399
L	3303	Inductor	CTF1399
L	3305	Inductor	CTF1379
L	3306	Inductor	CTF1399
L	3307	Coil	LCYA101J2520
L	3308	Inductor	CTF1473
X	3001	Radiator 4.97MHz	CSS1574
X	3301	Radiator 12.0MHz	CSS1568

RESISTORS

R	3001		RS1/16SS103J
R	3002		RS1/16SS103J
R	3003		RS1/16SS681J
R	3004		RS1/16SS103J
R	3005		RS1/16SS221J
R	3006		RS1/16SS221J
R	3007		RS1/16SS221J
R	3008		RS1/16SS0R0J
R	3009		RS1/16SS222J
R	3010		RS1/16SS473J
R	3011		RS1/16SS102J
R	3012		RS1/16SS103J
R	3013		RS1/16SS222J
R	3015		RS1/16SS105J
R	3016		RS1/16SS102J
R	3017		RS1/16SS221J
R	3018		RS1/16SS221J
R	3019		RS1/16SS103J
R	3020		RS1/16SS103J
R	3021		RS1/16SS682J
R	3022		RS1/16SS682J
R	3023		RS1/16SS221J
R	3024		RS1/16SS221J
R	3025		RS1/16SS221J
R	3027		RS1/16SS103J
R	3028		RS1/16SS221J
R	3029		RS1/16SS221J
R	3030		RS1/16SS221J
R	3031		RS1/16SS102J
R	3032		RS1/16SS102J
R	3033		RS1/16SS102J
R	3034		RS1/16SS103J
R	3036		RS1/16SS682J
R	3037		RS1/16SS682J
R	3038		RS1/16SS682J
R	3039		RS1/16SS682J
R	3040		RS1/16SS682J
R	3041		RS1/16SS681J
R	3042		RS1/16SS681J
R	3043		RS1/16SS681J
R	3044		RS1/16SS104J
R	3045		RS1/16SS104J
R	3046		RS1/16SS104J
R	3047		RAB4CQ220J
R	3049		RS1/16SS0R0J
R	3050		RAB4CQ220J
R	3051		RAB4CQ220J
R	3052		RAB4CQ220J
R	3053		RAB4CQ220J
R	3054		RAB4CQ220J
R	3055		RAB4CQ220J
R	3056		RAB4CQ220J
R	3057		RAB4CQ220J
R	3058		RAB4CQ220J
R	3059		RAB4CQ220J

Circuit Symbol and No.	Part Name	Part No.
R 3060		RS1/16SS101J
R 3061		RS1/16SS101J
R 3062		RAB4CQ220J
R 3064		RS1/16SS220J
R 3065		RS1/16SS220J
R 3066		RS1/16SS220J
R 3067		RS1/16SS102J
R 3068		RS1/16SS102J
R 3069		RS1/16SS102J
R 3070		RS1/16SS103J
R 3071		RS1/16SS102J
R 3077		RS1/16SS0R0J
R 3078		RS1/16SS332J
R 3079		RS1/16SS102J
R 3080		RS1/10S0R0J
R 3102		RS1/16SS682J
R 3103		RS1/16SS682J
R 3104		RS1/16SS0R0J
R 3105		RS1/16SS102J
R 3106		RS1/16SS682J
R 3107		RS1/16SS682J
R 3108		RS1/16SS682J
R 3109		RS1/16SS102J
R 3110		RS1/16SS104J
R 3111		RS1/16SS682J
R 3112		RS1/16SS680J
R 3113		RS1/16SS680J
R 3114		RS1/16SS680J
R 3115		RS1/16SS680J
R 3116		RS1/16SS680J
R 3117		RS1/16SS680J
R 3118		RS1/16SS680J
R 3119		RS1/16SS680J
R 3120		RS1/16SS680J
R 3121		RS1/16SS102J
R 3122		RS1/16SS101J
R 3123		RS1/16SS101J
R 3124		RS1/16SS101J
R 3125		RS1/16SS472J
R 3126		RS1/16SS221J
R 3127		RS1/16SS101J
R 3128		RS1/16SS101J
R 3129		RS1/16SS102J
R 3131		RS1/16SS202J
R 3132		RS1/16SS151J
R 3133		RS1/16SS332J
R 3134		RS1/16SS0R0J
R 3135		RS1/16SS0R0J
R 3140		RS1/16S0R0J
R 3141		RS1/16S0R0J
R 3143		RS1/16S0R0J
R 3201		RS1/16SS562J
R 3202		RS1/16SS473J
R 3204		RS1/16SS473J
R 3205		RS1/16SS103J
R 3206		RS1/16SS102J
R 3207		RS1/16SS270J
R 3208		RS1/16SS270J
R 3209		RS1/16SS270J
R 3210		RS1/16SS270J
R 3211		RS1/16SS270J
R 3212		RS1/16SS270J
R 3213		RS1/16SS270J
R 3214		RS1/16SS270J
R 3301		RS1/16SS470J
R 3302		RS1/16SS470J
R 3303		RS1/16SS104J
R 3304		RS1/16SS102J
R 3305		RS1/16SS102J
R 3306		RS1/16SS681J
R 3307		RS1/16SS103J
R 3308		RS1/16SS101J
R 3309		RS1/16SS101J
R 3310		RS1/16SS102J
R 3311		RS1/16SS101J
R 3313		RS1/16SS101J
R 3314		RS1/16SS104J
R 3315		RS1/16SS104J
R 3316		RS1/16SS104J
R 3317		RS1/16SS681J
R 3318		RS1/16SS0R0J
R 3320		RS1/16SS0R0J
R 3322		RS1/16SS680J
R 3323		RS1/16SS680J
R 3324		RS1/16SS680J
R 3326		RS1/16SS103J
R 3327		RS1/16SS103J
R 3328		RS1/16SS102J
R 3329		RS1/16SS102J
R 3330		RS1/16S102J
R 3333		RAB4CQ220J
R 3334		RAB4CQ220J
R 3335		RAB4CQ220J
R 3336		RAB4CQ220J
R 3337		RS1/16SS102J
R 3338		RS1/16SS102J
R 3340		RS1/16SS101J
R 3341		RS1/16SS101J
R 3342		RS1/16SS101J

CAPACITORS

Circuit Symbol and No.	Part Name	Part No.
C 3001		CKSRYB104K16
C 3002		CCSSCH220J50
C 3003		CSZSR470M6R3
C 3004		CCSSCH220J50
C 3005		CKSSYB103K16
C 3006		CKSRYB104K16
C 3007		CKSSYB104K10
C 3008		CKSRYB104K16
C 3009		CKSRYB104K16
C 3010		CSZSR470M6R3
C 3011		CKSSYB104K10
C 3012		CKSSYB103K16
C 3013		CKSRYB105K10
C 3014		CKSRYB105K10
C 3015		CKSYB106K6R3
C 3016		CKSSYB104K10
C 3017		CKSRYB105K10
C 3018		CKSSYB104K10
C 3019		CKSRYB104K16
C 3020		CKSSYB104K10
C 3021		CKSSYB104K10
C 3024		CKSRYB104K16
C 3025		CKSSYB104K10
C 3101		CCSSCH4R0C50
C 3102		CKSSYB104K10
C 3104		CKSRYB105K10
C 3105		CKSRYB105K10
C 3106		CKSSYB104K10
C 3107		CKSSYB104K10
C 3108		CCSRCH101J50

Circuit Symbol and No.	Part Name	Part No.
C 3109		CKSSYB104K10
C 3110		CKSSYB104K10
C 3111		CKSSYB104K10
C 3112		CKSSYB104K10
C 3113		CKSSYB104K10
C 3114		CKSRYB105K10
C 3115		CKSSYB104K10
C 3116		CKSSYB104K10
C 3117		CKSSYB104K10
C 3118		CKSSYB104K10
C 3119		CKSRYB105K10
C 3120		CCSSCH220J50
C 3121		CCSRCH101J50
C 3122		CCSRCH101J50
C 3123		CKSYB475K10
C 3201		CKSSYB104K10
C 3204		CKSYB106K6R3
C 3205		CKSYB106K6R3
C 3301		CSZSR470M6R3
C 3302		CKSSYB104K10
C 3303		CKSSYB104K10
C 3304		CKSYB475K10
C 3305		CKSYB475K10
C 3306		CSZSR470M6R3
C 3307		CKSSYB104K10
C 3308		CKSSYB104K10
C 3309		CKSSYB104K10
C 3310		CKSSYB104K10
C 3312		CCSSCH330J50
C 3313		CCSSCH330J50
C 3314		CKSSYB104K10
C 3315		CKSSYB104K10
C 3316		CKSSYB104K10
C 3317		CKSRYB104K16
C 3318		CKSSYB104K10
C 3319		CKSSYB104K10
C 3320		CKSRYB104K16
C 3321		CKSRYB104K16
C 3323		CKSSYB104K10
C 3324		CKSRYB104K16
C 3325		CKSSYB104K10
C 3326		CKSSYB104K10
C 3327		CKSRYB104K16
C 3328		CKSSYB104K10
C 3329		CKSSYB104K10
C 3330		CKSRYB104K16
C 3331		CKSRYB104K16
C 3332		CKSSYB104K10
C 3333		CKSSYB104K10
C 3334		CKSRYB105K10
C 3335		CKSRYB105K10
C 3336		CKSSYB222K50
C 3337		CKSSYB222K50
C 3338		CSZSR470M6R3
C 3339		CSZSR470M6R3

E Unit Number : CWM7826
Unit Name : Panel Unit

MISCELLANEOUS

D	1801	LED	CL170UBX
D	1802	LED	CL170FGCD
D	1803	LED	CL170FGCD
S	1801	Switch(CSENS)	CSN1027
S	1802	Spring Switch(MSSENS)	CSN1051

Circuit Symbol and No.	Part Name	Part No.

RESISTORS

R	1801		RS1/16S121J
R	1802		RS1/16S121J
R	1803		RS1/16S680J
R	1804		RS1/16S680J
R	1805		RS1/16S680J
R	1806		RS1/16S680J

CAPACITORS

C	1801		CKSRYB104K16

F Unit Number : CWX2532
Unit Name : CD Core Unit

MISCELLANEOUS

IC	201	IC	TA2153FN
IC	301	IC	TC9495F2
IC	401	IC	BA5811FM
IC	601	IC	PE5273A
IC	801	IC	BA05SFP
Q	101	Transistor	2SD1664
Q	102	Transistor	UMD2N
Q	601	Transistor	DTA114EU
TH	601	Thermistor	CCX1037
X	601	Ceramic Resonator 32.00MHz	CSS1544
S	901	Spring Switch(LOAD,EJ)	CSN1052
S	902	Spring Switch(LOAD,EJ)	CSN1052
S	903	Spring Switch(LOAD,EJ)	CSN1052
S	904	Spring Switch(HOME)	CSN1051

RESISTORS

R	101		RS1/16S222J
R	102		RS1/16S220J
R	103		RS1/16S220J
R	104		RS1/16S220J
R	105		RS1/16S220J
R	201		RS1/16S153J
R	202		RS1/16S153J
R	203		RS1/16S823J
R	204		RS1/16S823J
R	205		RS1/16S102J
R	206		RS1/16S823J
R	207		RS1/16S102J
R	208		RS1/16S124J
R	209		RS1/16S183J
R	210		RS1/16S153J
R	211		RS1/16S103J
R	212		RS1/16S103J
R	213		RS1/16S124J
R	215		RS1/16S471J
R	216		RS1/16S473J
R	217		RS1/16S473J
R	301		RS1/16S153J
R	302		RS1/16S332J
R	303		RS1/16S332J
R	304		RS1/16S105J
R	305		RS1/16S472J
R	308		RS1/16S471J
R	309		RS1/16S471J
R	310		RS1/16S471J
R	311		RS1/16S221J
R	312		RS1/16S103J
R	313		RS1/16S473J
R	314		RS1/16S224J
R	315		RS1/16S334J
R	316		RS1/16S473J

Circuit Symbol and No.	Part Name	Part No.
R 321		RS1/16S0R0J
R 401		RS1/16S103J
R 403		RS1/16S154J
R 404		RS1/16S362J
R 405		RS1/16S183J
R 406		RS1/16S183J
R 407		RS1/16S752J
R 408		RS1/16S102J
R 409		RS1/16S103J
R 410		RS1/16S752J
R 411		RS1/16S153J
R 412		RS1/16S154J
R 413		RS1/16S333J
R 602		RS1/16S1502D
R 603		RS1/16S222J
R 604		RS1/16S104J
R 605		RS1/16S223J
R 606		RS1/16S473J
R 607		RS1/16S103J
R 608		RS1/16S102J
R 609		RS1/16S102J
R 610		RAB4CQ102J
R 611		RS1/16S473J
R 701		RAB4CQ221J
R 702		RS1/16S221J
R 703		RS1/16S102J
R 704		RS1/16S0R0J
R 707		RS1/16S221J
R 708		RS1/16S0R0J
R 711		RS1/16S0R0J
R 713		RS1/16S0R0J
R 901		RS1/16S104J
R 902		RS1/16S473J
R 903		RS1/16S273J

CAPACITORS

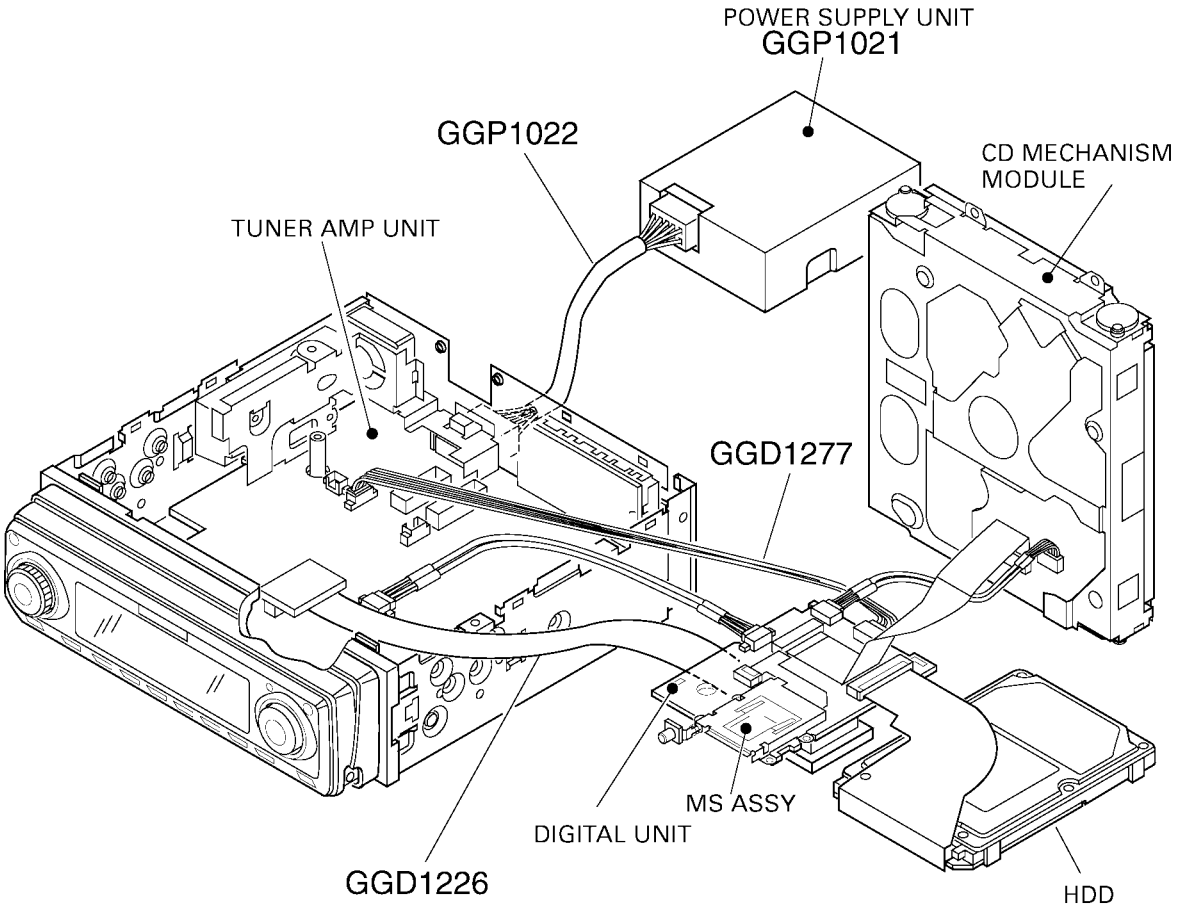
Circuit Symbol and No.	Part Name	Part No.
C 101		CEVL470M6R3
C 102		CKSRYB102K50
C 103		CKSRYB104K16
C 104		CKSRYB334K10
C 105		CEVL470M6R3
C 106		CKSRYB104K16
C 201		CKSRYB104K16
C 202		CCSRCH560J50
C 204		CKSRYB334K10
C 205		CKSRYB334K10
C 206		CKSRYB273K25
C 207		CKSRYB273K25
C 208		CKSRYB104K16
C 209		CKSRYB104K16
C 210		CCSRCK2R0C50
C 211		CCSRCH220J50
C 212		CCSRCH220J50
C 301		CKSRYB153K25
C 302		CKSRYB104K16
C 303		CKSRYB103K50
C 304		CKSRYB822K50
C 305		CKSRYB223K25
C 306		CKSRYB104K16
C 307		CKSRYB103K50
C 308		CKSRYB104K16
C 309		CKSRYB473K16
C 310		CKSRYB473K16
C 311		CKSRYB104K16
C 312		CKSRYB104K16
C 313		CKSRYB104K16
C 314		CCSRCH221J50
C 315		CEVL220M16
C 316		CEVL101M6R3
C 317		CKSRYB104K16
C 318		CKSRYB104K16
C 319		CKSRYB104K16
C 320		CCSRCH330J50
C 325		CCSRCH471J50
C 329		CKSRYB223K25
C 401		CCSRCH271J50
C 402		CCSRCH471J50
C 403		CKSRYB223K25
C 404		CKSRYB103K50
C 405		CEVL101M10
C 601		CKSRYB103K50
C 602		CKSRYB472K50
C 703	10µF/10V	CCH1349
C 801	10µF/10V	CCH1349
C 802		CEVL101M6R3
C 803		CKSRYB334K10
C 901		CKSRYB103K50
C 902		CKSRYB103K50

Miscellaneous Parts List

M	1	Carriage Motor Assy(-D)	CXB6361
M	2	Load Motor Assy(-D)	CXB6340
M	3	Motor Unit(SPINDLE)	CXB6620
		Pickup Unit(Service)(P8)	CXX1305

6. ADJUSTMENT

6.1 CONNECTION DIAGRAM



6.2 CD ADJUSTMENT

1) Precautions

- This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to VREF(approx. 2.1V) instead of GND.
  If VREF and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.
  Do not connect the negative probe of the measuring equipment to VREF and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VREF with the channel 2 negative probe connected to GND.
  Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.
  If by accident VREF comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.

- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.

- The RFI and RFO signals are easy to oscillate because of a wide band. When observing them, insert a resistor of about 1 kΩ to the series.

- This equipment will not guarantee the load ejection operation when the mechanical unit is turned upside down. In particular, if the ejection operation is incorrectly performed and recovery is disabled, the recovery is enabled by resetting a product or turning ACC off to on.

2) Test Mode

This mode is used for adjusting the CD mechanism module of the device.

- Test mode starting procedure
  Reset while pressing the **DISP** and ► keys together.

- Test mode cancellation
  Switch ACC, back-up OFF.

- After pressing the EJECT key, do not press any other key until the disk is completely ejected.

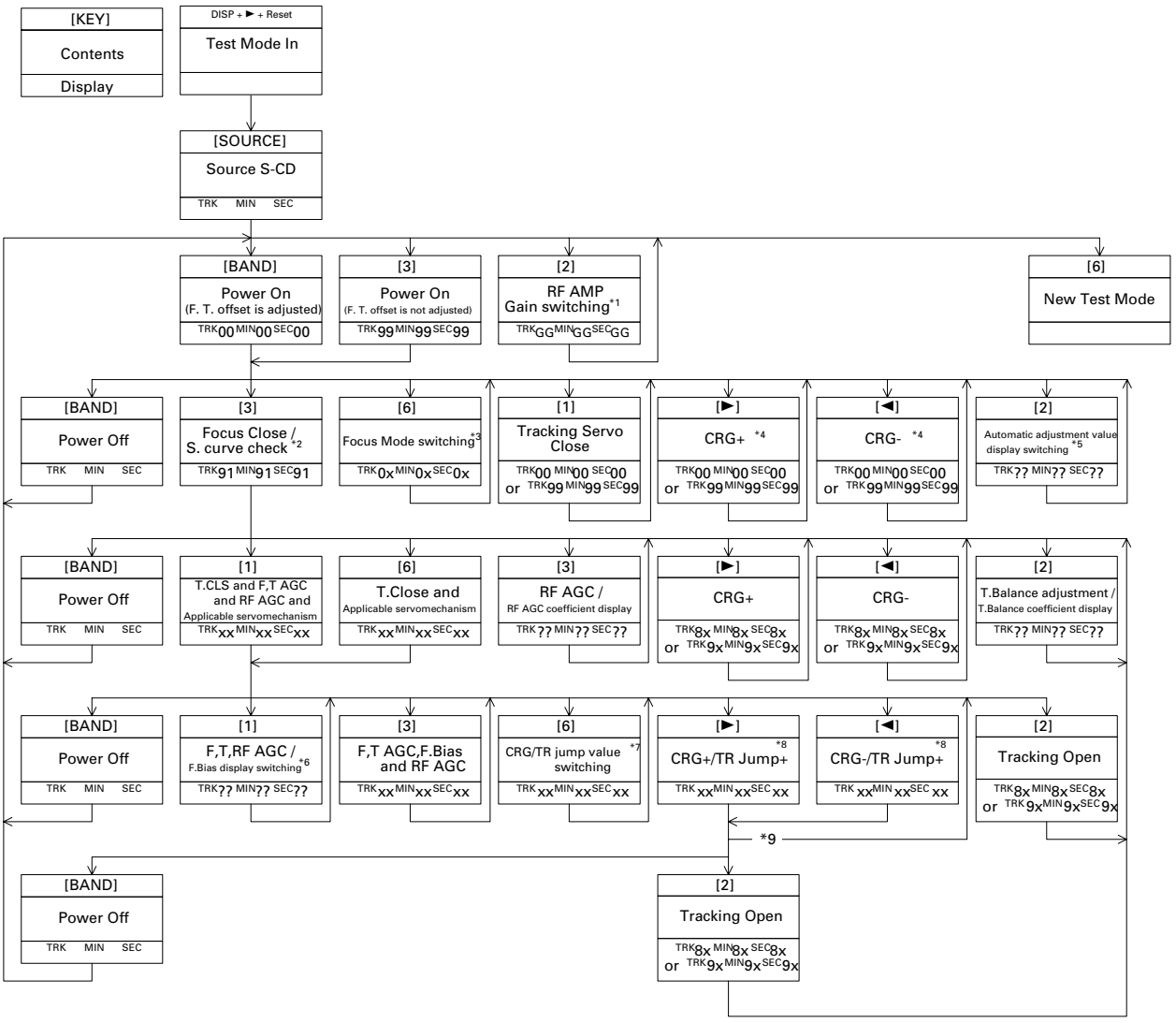
- If the ► or ◄ key is pressed while focus search is in progress, immediately turn the power off (otherwise the actuator may be damaged due to adhesion of the lenses).

- Jump operation of TRs other than 100TR continues after releasing the key. CRG move and 100TR jump operations are brought into the “Tracking close” status when the key is released.

- Powering Off/On resets the jump mode to “1TR”, the RF AMP gain setting to TYP, and the automatic adjustment value to the initial value.

- Please use the "remote control unit of the product accessory" after the test mode starts.

● Flow Chart



*1) TYP → +12dB → TYP … Switch a value

*2) Focus Close for "00" or "99" display
Perform the S. curve check operation for "01" display

*3) Focus Close setting → S. curve check setting → F. EQ measurement setting … Switch a value

*4) CRG motor voltage = 2 [V]

*5) F.Offset Display → T.Offset Display → Switch to the order of the original display

*6) TRK/MIN/SEC → F.AGC Gain → T.AGC Gain → F.Bias → RF AGC Gain … Switch a value

*7) 1TR → 32TR → 100TR → CRG Move … Switch a value

*8) 1TR/32TR/100TR

*9) Only at the time of CRG move or 100TR jump

[Key]	Operation	
	Test Mode	New Test Mode
[BAND]	Power On/Off	Error occurrence time/ cause display switching
[►]	CRG +/TR Jump+ (Direction of the external surface)	TRK+/FF
[◄]	CRG -/TR Jump- (Direction of the internal surface)	TRK-/REV
[1]	T.CLS and AGC and Applicable servomechanism/ AGC,AGC display switching	SCAN
[2]	RF Gain switching/Offset adjustment display/ T.Balance adjustment/T.OPN	MODE
[3]	F.CLS,S.Curve/Rough Servo and RF	(ITP)
-	Lens down/SPDL 1X/2X switching (Double-speed compatibility only)	-
-	Error rate measurement	-
[6]	F.Mode switching/T.CLS/CRG Jump switching	Auto/Manual switching

6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

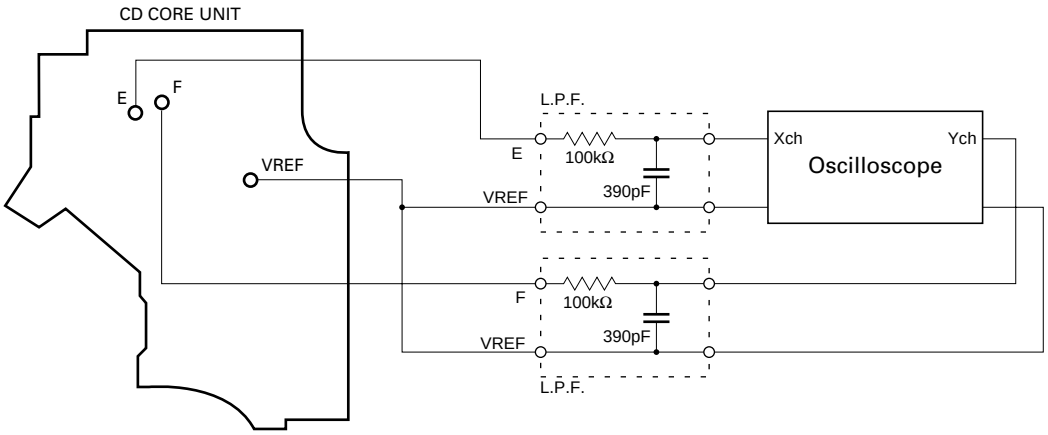
• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, VREF
• Disc	• ABEX TCD-784
• Mode	• TEST MODE



• **Checking Procedure**
1. In test mode, load the disc and switch the 5V regulator on.
2. Using the ► and ◄ buttons, move the PU unit to the innermost track.
3. Press key **3** to close focus, the display should read "91". Press key **2** to implement the tracking balance adjustment the display should now read "81". Press key **3**. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

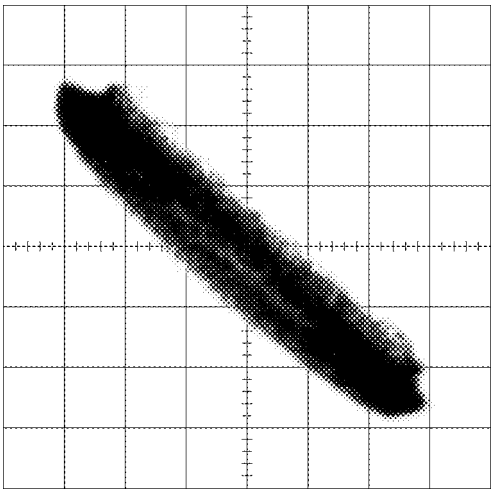
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

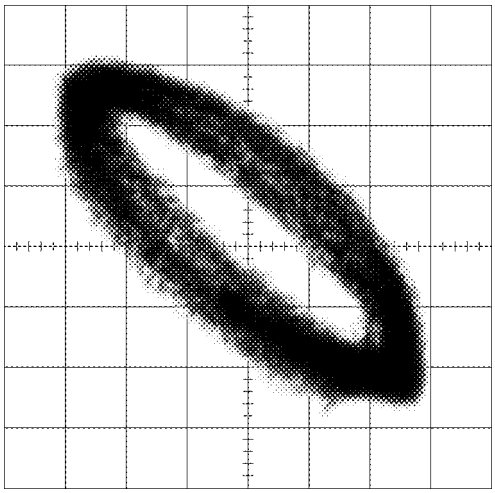
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

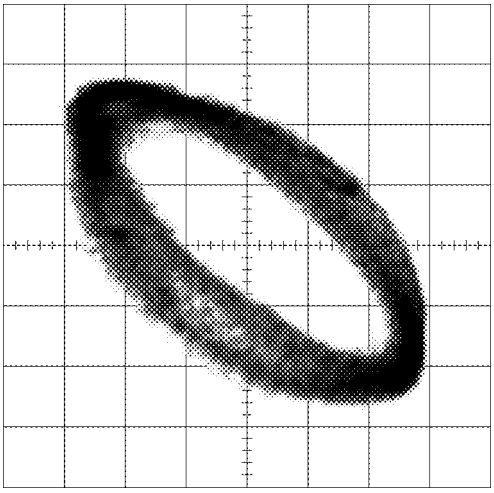
0°



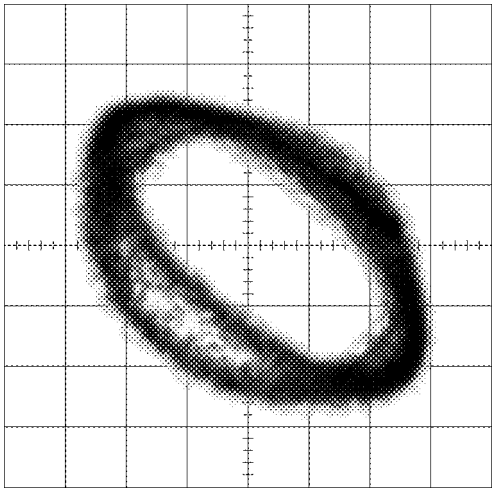
30°



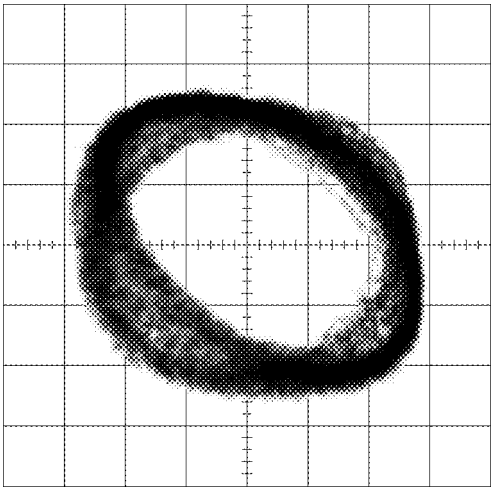
45°



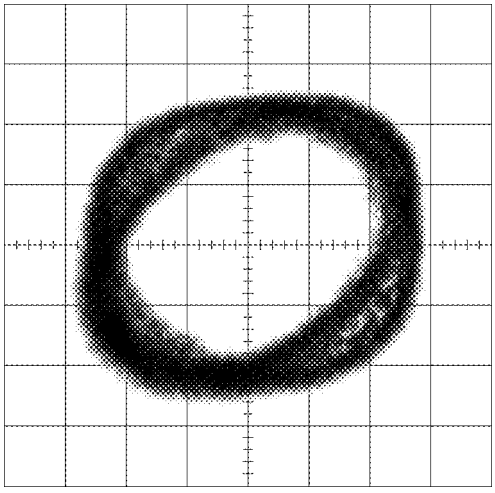
60°



75°



90°



6.4 TEST MODE(CD)

● CD Section Error No. Display

If the CD player cannot operate or if it stops when an error occurred in operation, it enters the error mode and displays the cause of the error in numerals. Accordingly, an object of this display is to assist in analysis and repair.

(1) Display example

Err XX

(2) Error codes

Error code	Type	Description	Details and cause
10	Mechanical unit	Carriage Home NG	Carriage cannot move to and from the inside circumference. → Defective Home SW, Carriage move error.
11	Electricity	Focus Search NG	Focus is disabled. → At the rear of disc. Disc damage, dirt and vibration are intense.
12	Electricity	Spindle Lock NG	Spindle Lock is not performed and no subcode can be read. → Defective spindle. Disc damage, dirt and vibration are intense.
14	Electricity	Mirror NG	CD-R to which data is not written. (At the rear of disc on rare occasions)
17	Electricity	Setup NG	AGC protection does not work. Focus immediately slips off. → Disc damage, dirt and vibration are intense.
19	Electricity	Setup NG	The tracking balance deviation is 50% or higher or the tracking error level is low. → The pickup or tracking error circuit is abnormal.
30	Electricity	Search Timeout	Could not reach the target address. → Carriage/tracking error, disc damage.
A0	System	Power Supply NG	Higher or lower than the specified voltage, or no power is output. → Defective SW transistor, power supply abnormality, load terminal NG.

* Setup indicates a series of operations until sound is issued after focus has been performed.

● CD Section Test Mode (Aging Operation and Setup Analysis)

Play is performed in the CD normal mode. However, after setup, in the protection operation, such as FOK (focus), LOCK (spindle), subcodes. sound skip and mechanical-unit errors, the error occurrence and a timeout, the occurrence cause and occurrence time are displayed. During setup, the operation status (internal RAM; CPOINT) of the CD software is displayed.

(1) Entering the new test mode

See the test mode flowchart on Page 92.

(2) Correspondence of keys between the test mode and new test mode

Key	Test mode		New test mode	
	Regulator OFF	Regulator ON	In-play	Error or protection occurrence
BAND	Regulator ON	Regulator OFF	—	Error occurrence time or error cause switching
►	—	FWD-KICK	TRACK >	—
◄	—	REV-KICK	< TRACK	—
1	—	TRACKING CLOSE	SCAN	—
2	—	TRACKING OPEN	MODE	—
3	—	FOCUS CLOSE	(ITP)	—
6	To new test mode	FOCUS MODE SWITCHING	AUTO/MANUAL	—

The conventional operation is performed for EJECT or CD ON/OFF.

(3) Error cause (error No.) codes

Error code	Type	Mode	Description	Details and cause
40	Electricity	PLAY	FOK=L 100mS	Focus slips off. → Damage, dirt, vibration and faulty servomechanism.
41	Electricity	PLAY	LOCK=L 100mS	Spindle Lock slips off. → Damage, dirt, vibration and faulty servomechanism.
42	Electricity	PLAY	Subcode NG 500mS	No subcode can be read. → Damage, dirt, vibration and faulty servomechanism.
43	Electricity	PLAY	Sound skip occurrence	Last address memory operation. → Damage, dirt, vibration and faulty servomechanism.

(4) Operation status display during setup

Status No.	Description	Protection operation
00	CD + 5 V ON is being processed.	None
01	SERVO LSI is being initialized (1/3).	None
02	CRAM of servo LSI is being initialized.	None
03	SERVO LSI is being initialized (2/3).	None
04	Offset is being adjusted (1/3).	None
05	Offset is being adjusted (2/3).	None
06	Offset is being adjusted (3/3).	None
07	FZD is being adjusted.	None
08	Servo LSI is being initialized (3/3).	None
10,11	Carriage Home processing start.	None
12	Carriage is moving toward the inside circumference.	Timeout for ten seconds, defective Home SW.
13	Carriage is moving toward the outside circumference.	Timeout for ten seconds, defective Home SW.
14	Carriage outer kicking.	None
15	Carriage is being sent to the outside circumference. (for one second)	None
20	Servo Close processing start.	None
21	Being processed before Focus Search start.	None
22	Spindle rotation, Focus Search start.	None
23	Focus Close (FOON = Low) wait.	Focus Search timeout.
24	Waiting after Focus Close.	None
25	Being processed before Focus Search start, at setup protection.	None
26	Being processed before Focus Search start, at fast recovery.	None
27	RF detection. (RFOK = Hi confirmation)	Focus slips off, no RF is output.
28	Spindle OLV rough servocontrol.	Focus slips off.
29	Setting before T balance adjustment processing start.	Focus slips off.
30	T balance adjustment (1/2).	Focus slips off.
31	T balance adjustment (2/2).	Focus slips off.
32	Spindle CLV stationary servocontrol.	Focus slips off.
33	Tracking Close processing (1/2).	Focus slips off.
34	Tracking Close processing (2/2).	Focus slips off.
35	Setting before Focus/Tracking AGC start.	Focus slips off.
36	Focus AGC start processing.	Focus slips off.
37	Focus AGC processing (1/2).	Focus slips off.
38	Focus AGC processing (2/2).	Focus slips off.
39	Setting before Tracking AGC start.	Focus slips off.

Status No.	Description	Protection operation
40	Tracking AGC start processing.	Focus slips off.
41	Tracking AGC processing.	Focus slips off.
42	Focus/Tracking AGC processing.	Focus slips off, AGC coefficient NG.
43	FE bias adjustment start processing.	Focus slips off.
44	FE bias adjustment.	Focus slips off.
45	RFAGC adjustment start.	Focus slips off.
46	RFRP level read processing.	Focus slips off, low RFRP level.
47	Setting before Lock confirmation.	Focus slips off.
48	Lock is being checked.	Focus slips off, Spindle Lock is not performed.
49	Setting before subcode confirmation.	Focus slips off.
50	Subcode confirmation.	Focus slips off, no subcode can be read.

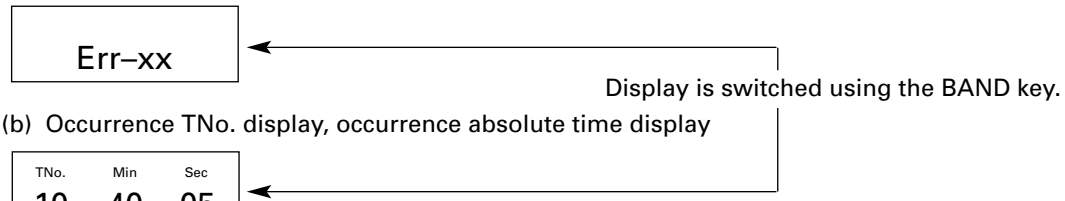
(5) Example of display on display unit

• During setup

• In operation (PLAY and SEARCH), this mode is almost the same as the normal mode.

• At protection/error occurrence

(a) Error display



(b) Occurrence TNo. display, occurrence absolute time display

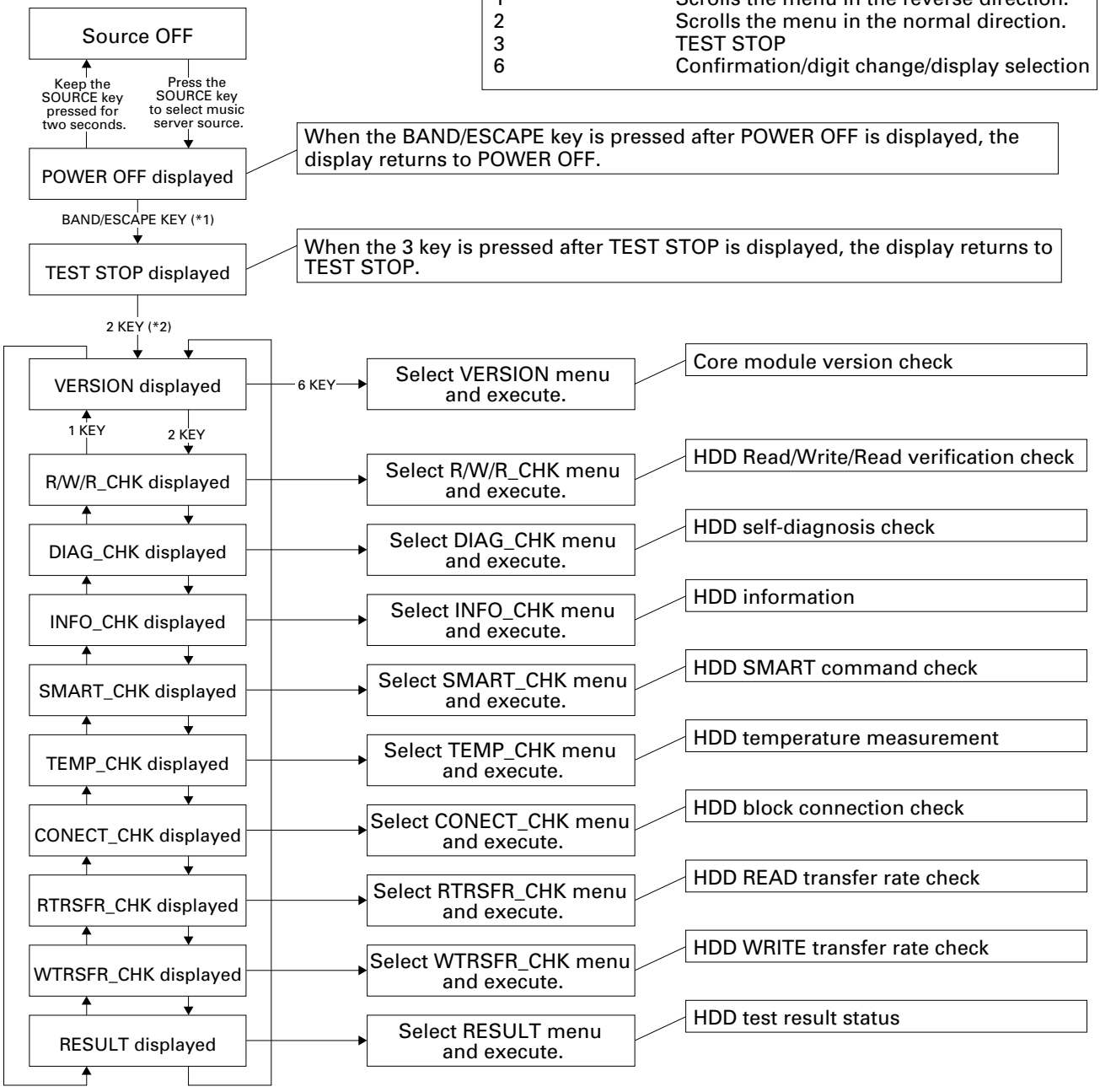
6.5 TEST MODE(HDD)

How to enter the test mode: Press the 4 and 6 keys simultaneously to reset. After that, select the source to be tested.

① HDD test mode general operational flow

Keys and operations in the HDD test mode

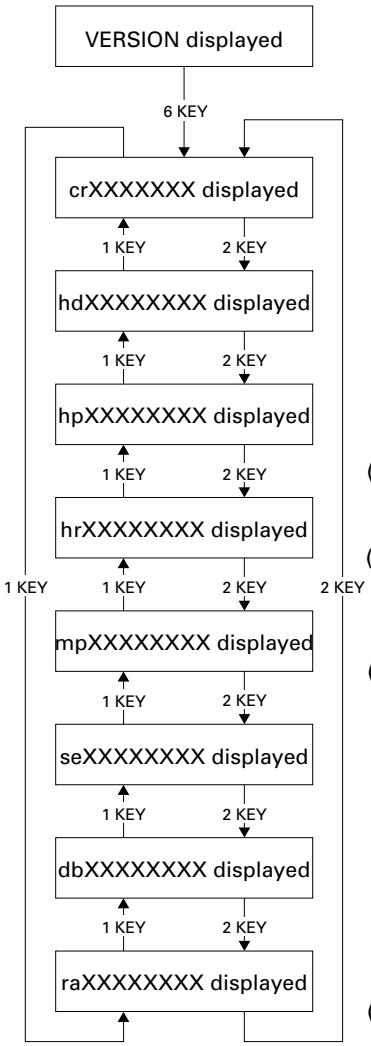
BAND/ESCAPE	POWER ON/OFF
→	Changes the setting value (+).
←	Changes the setting value (-).
1	Scrolls the menu in the reverse direction.
2	Scrolls the menu in the normal direction.
3	TEST STOP
6	Confirmation/digit change/display selection


Source OFF
Keep the SOURCE key pressed for two seconds.
Press the SOURCE key to select music server source.
POWER OFF displayed
When the BAND/ESCAPE key is pressed after POWER OFF is displayed, the display returns to POWER OFF.
BAND/ESCAPE KEY (*1)
TEST STOP displayed
When the 3 key is pressed after TEST STOP is displayed, the display returns to TEST STOP.
2 KEY (*2)
VERSION displayed
6 KEY
Select VERSION menu and execute.
Core module version check
1 KEY
2 KEY
R/W/R_CHK displayed
Select R/W/R_CHK menu and execute.
HDD Read/Write/Read verification check
DIAG_CHK displayed
Select DIAG_CHK menu and execute.
HDD self-diagnosis check
INFO_CHK displayed
Select INFO_CHK menu and execute.
HDD information
SMART_CHK displayed
Select SMART_CHK menu and execute.
HDD SMART command check
TEMP_CHK displayed
Select TEMP_CHK menu and execute.
HDD temperature measurement
CONECT_CHK displayed
Select CONECT_CHK menu and execute.
HDD block connection check
RTRSFR_CHK displayed
Select RTRSFR_CHK menu and execute.
HDD READ transfer rate check
WTRSFR_CHK displayed
Select WTRSFR_CHK menu and execute.
HDD WRITE transfer rate check
RESULT displayed
Select RESULT menu and execute.
HDD test result status

*1
Any key input is impossible until the power is turned on after the BAND/ESCAPE key is pressed.
(TEST STOP is displayed.)
*2
For operations with numerical keys, verify that the numbers of 1 to 6 are displayed.
If there is no number displayed, press the NEXT KEY to display them.

② VERSION menu: Core module version check

(This menu checks and displays the versions for software installed in the core module.)



: XXXXXXXX: Software version of core module microcomputer

: XXXXXXXX: HDD version (*1)
*1 The software version is displayed for HDD control in the production line.
(Ex. hd□1-□1-□A)

: XXXXXXXX: Firmware version of HDD playback for CXD1859AR (*2)
*2 ATRAC CODEC DSP/Magic Gate core /Memory Stick Interface/USB Interface LSI
(Always displayed as the above)

: XXXXXXXX: Firmware version of HDD recording for CXD1859AR (*2)
(Always displayed as the above)

: XXXXXXXX: Firmware version of Memory Stick playback for CXD1859AR (*2)
(Always displayed as the above)

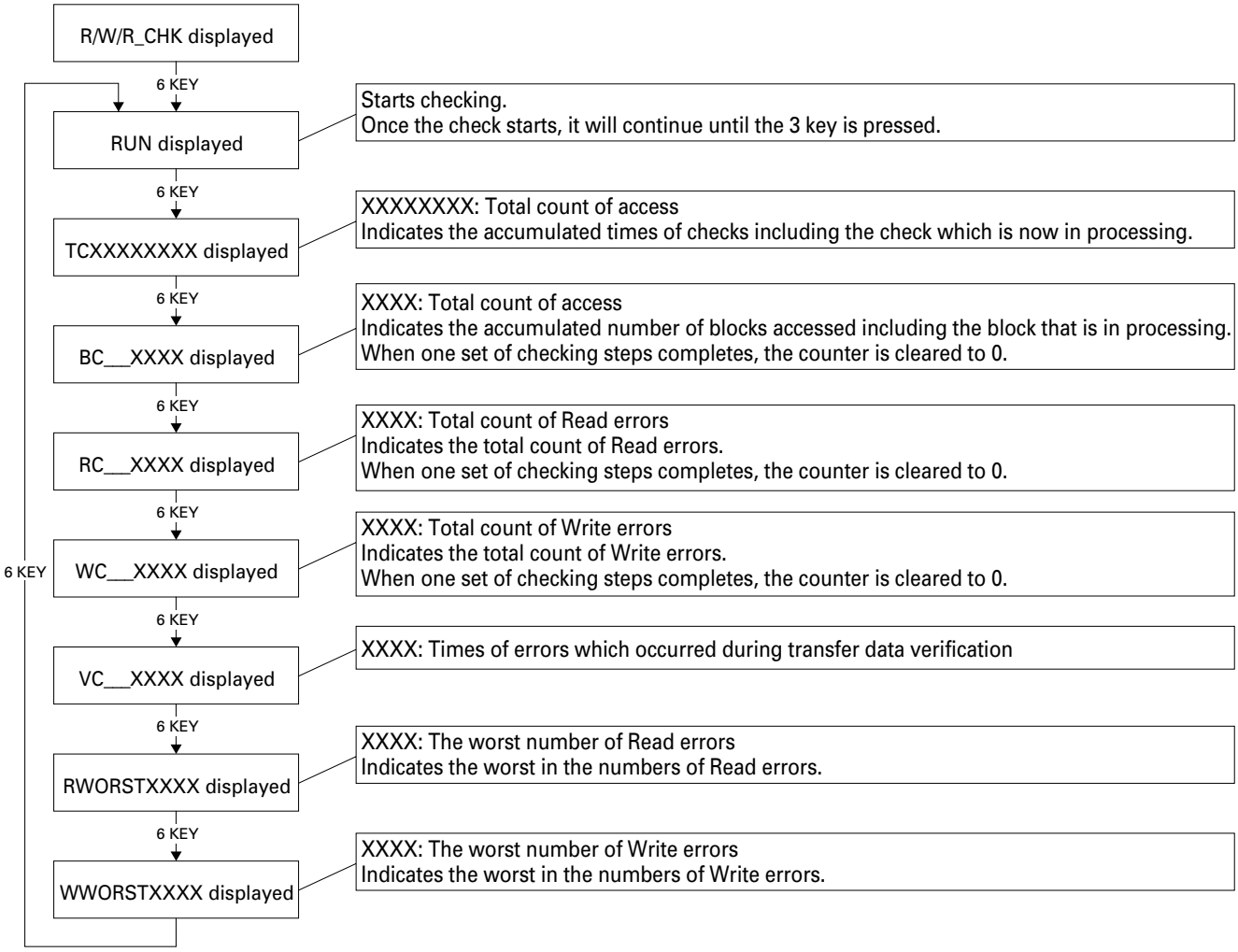
: XXXXXXXX: Software version of CDDB scan engine

: XXXXXXXX: Software version of CDDB

: XXXXXXXX: Software version of recording core module
(Always displayed as the above)

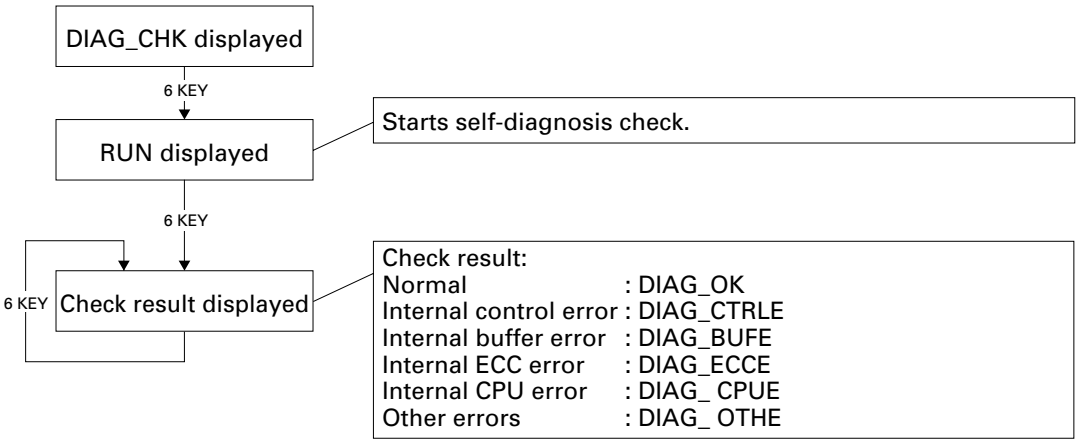
③ R/W/R_CHK menu: HDD Read/Write/Read verification check

This menu repeats and checks one operation block of Read access (before Write), Write access, and Read verification access (after Write) 10,000 times during one set of checking steps. These operations mean a total of 5 Mbytes data transfer.
* The displayed values are expressed in hexadecimal number system.


R/W/R_CHK displayed
6 KEY
RUN displayed
Starts checking.
Once the check starts, it will continue until the 3 key is pressed.
6 KEY
TCXXXXXXXX displayed
XXXXXXXX: Total count of access
Indicates the accumulated times of checks including the check which is now in processing.
6 KEY
BC___XXXX displayed
XXXX: Total count of access
Indicates the accumulated number of blocks accessed including the block that is in processing.
When one set of checking steps completes, the counter is cleared to 0.
6 KEY
RC___XXXX displayed
XXXX: Total count of Read errors
Indicates the total count of Read errors.
When one set of checking steps completes, the counter is cleared to 0.
6 KEY
6 KEY
WC___XXXX displayed
XXXX: Total count of Write errors
Indicates the total count of Write errors.
When one set of checking steps completes, the counter is cleared to 0.
6 KEY
VC___XXXX displayed
XXXX: Times of errors which occurred during transfer data verification
6 KEY
RWORSTXXXX displayed
XXXX: The worst number of Read errors
Indicates the worst in the numbers of Read errors.
6 KEY
WWORSTXXXX displayed
XXXX: The worst number of Write errors
Indicates the worst in the numbers of Write errors.

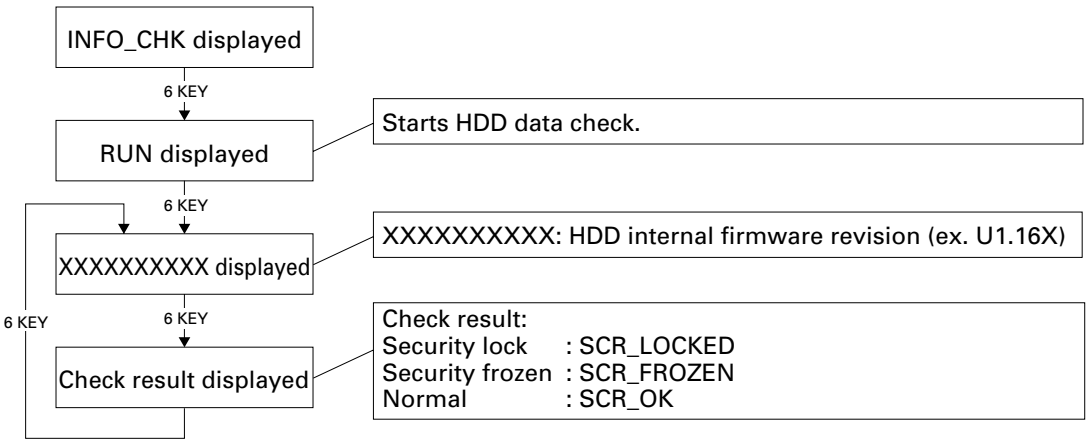
④ DIAG_CHK menu: HDD self-diagnosis check

This menu sends ATA Diagnostics command to the HDD to operate its internal functions (internal ROM/RAM check and control LSI register check), and obtains the results of self-diagnosis checks.



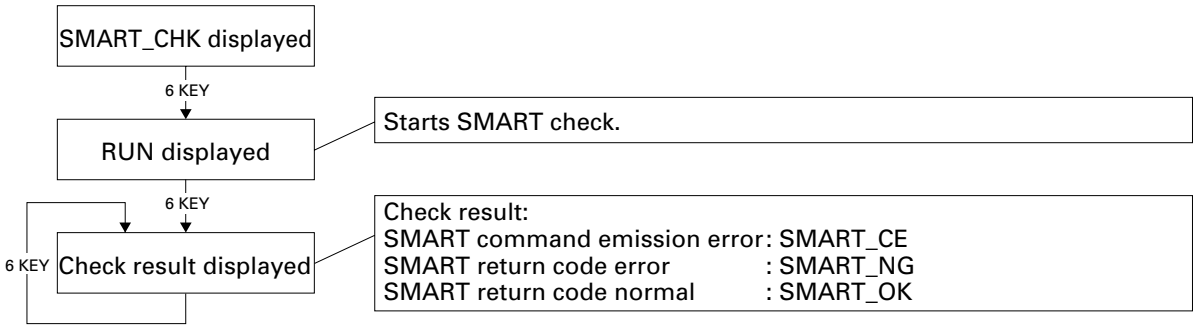
⑤ INFO_CHK menu: HDD information

This menu sends ATA Identify command to the HDD to obtain the HDD data (HDD firmware revision and security lock status check results).



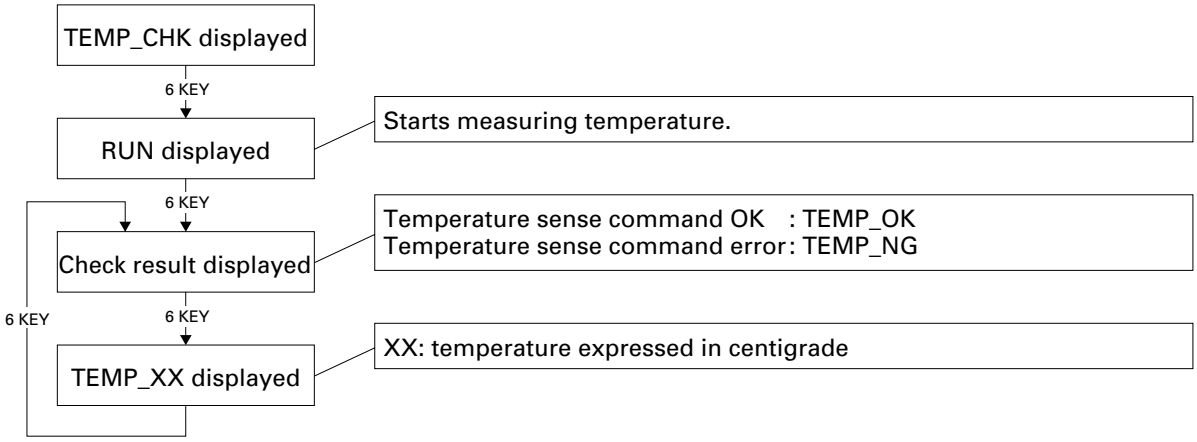
⑥ SMART_CHK menu: HDD SMART command check

Using ATA SMART Return Status command, this menu monitors the inside of the HDD, and predicts HDD errors and/or problems that may occur to notify.
This SMART function is not available in the normal operation mode but in the test mode menu.



⑦ TEMP_CHK menu: HDD temperature measurement

This menu measures the temperature inside the HDD by using Toshiba HDD vender unique command.



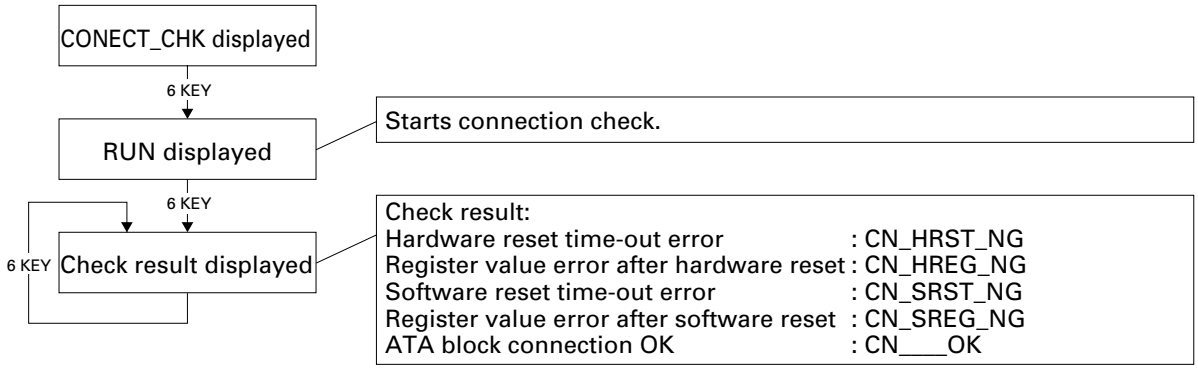
Menu of measuring HDD's temperature in HDD test mode: hexadecimal values (shown on the display) → decimal values (centigrade) transformation table

display	centigrade(°C)
ec	-20
ed	-19
ee	-18
ef	-17
f0	-16
f1	-15
f2	-14
f3	-13
f4	-12
f5	-11
f6	-10
f7	-9
f8	-8
f9	-7
fa	-6
fb	-5
fc	-4
fd	-3
fe	-2
ff	-1
00	0
01	1
02	2
03	3
04	4
05	5
06	6
07	7
08	8
09	9
0a	10
0b	11
0c	12
0d	13
0e	14
0f	15
10	16
11	17
12	18
13	19
14	20
15	21
16	22
17	23
18	24
19	25
1a	26
1b	27
1c	28
1d	29
1e	30
1f	31
20	32
21	33
22	34
23	35

display	centigrade(°C)
24	36
25	37
26	38
27	39
28	40
29	41
2a	42
2b	43
2c	44
2d	45
2e	46
2f	47
30	48
31	49
32	50
33	51
34	52
35	53
36	54
37	55
38	56
39	57
3a	58
3b	59
3c	60
3d	61
3e	62
3f	63
40	64
41	65
42	66
43	67
44	68
45	69
46	70
47	71
48	72
49	73
4a	74
4b	75
4c	76
4d	77
4e	78
4f	79
50	80
51	81
52	82
53	83
54	84
55	85
56	86
57	87
58	88
59	89
5a	90

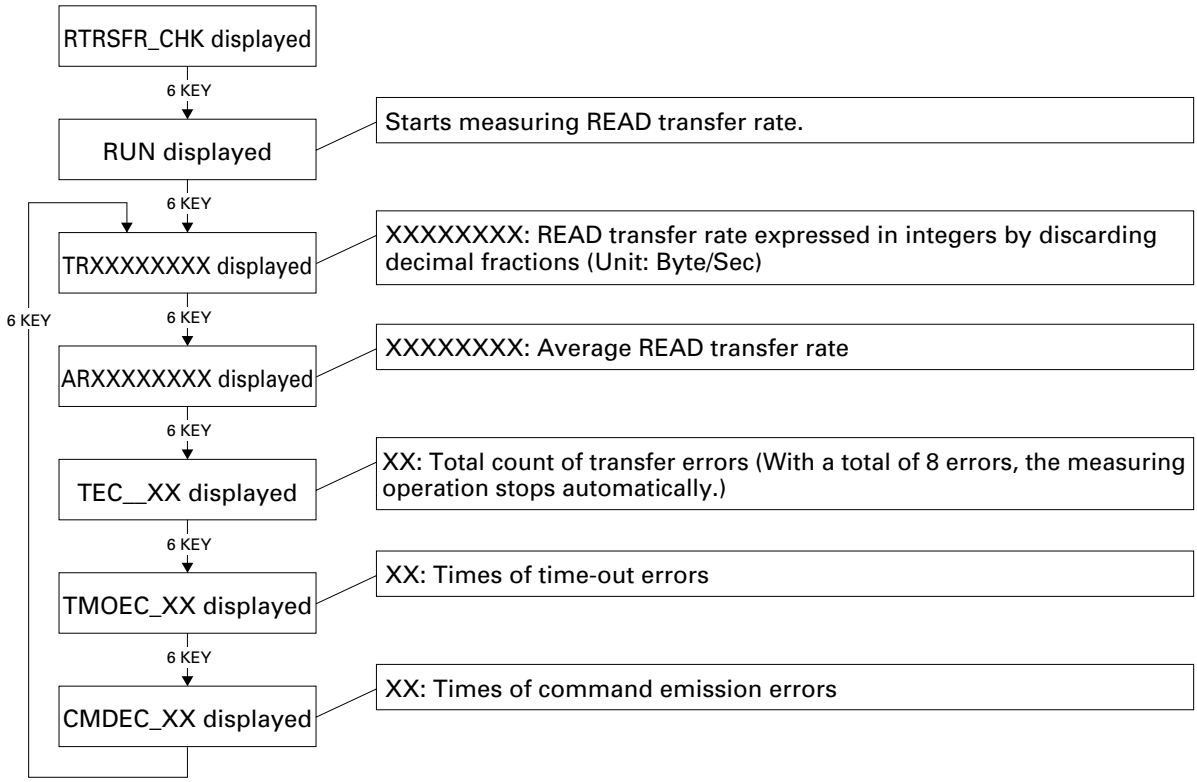
⑧ CONECT_CHK menu: HDD block connection check

This menu sends the hardware reset command or the software reset command to the HDD block, and obtains the result status from the HDD block.
These two checks make it possible to verify the connections of IDE connectors.
When xx_xxxx_NG is displayed as check result, there may be poor connection at either of the HDD data, address and control terminals.


CONECT_CHK displayed
6 KEY
RUN displayed
Starts connection check.
6 KEY
6 KEY
Check result displayed
Check result:
Hardware reset time-out error : CN_HRST_NG
Register value error after hardware reset : CN_HREG_NG
Software reset time-out error : CN_SRST_NG
Register value error after software reset : CN_SREG_NG
ATA block connection OK : CN____OK

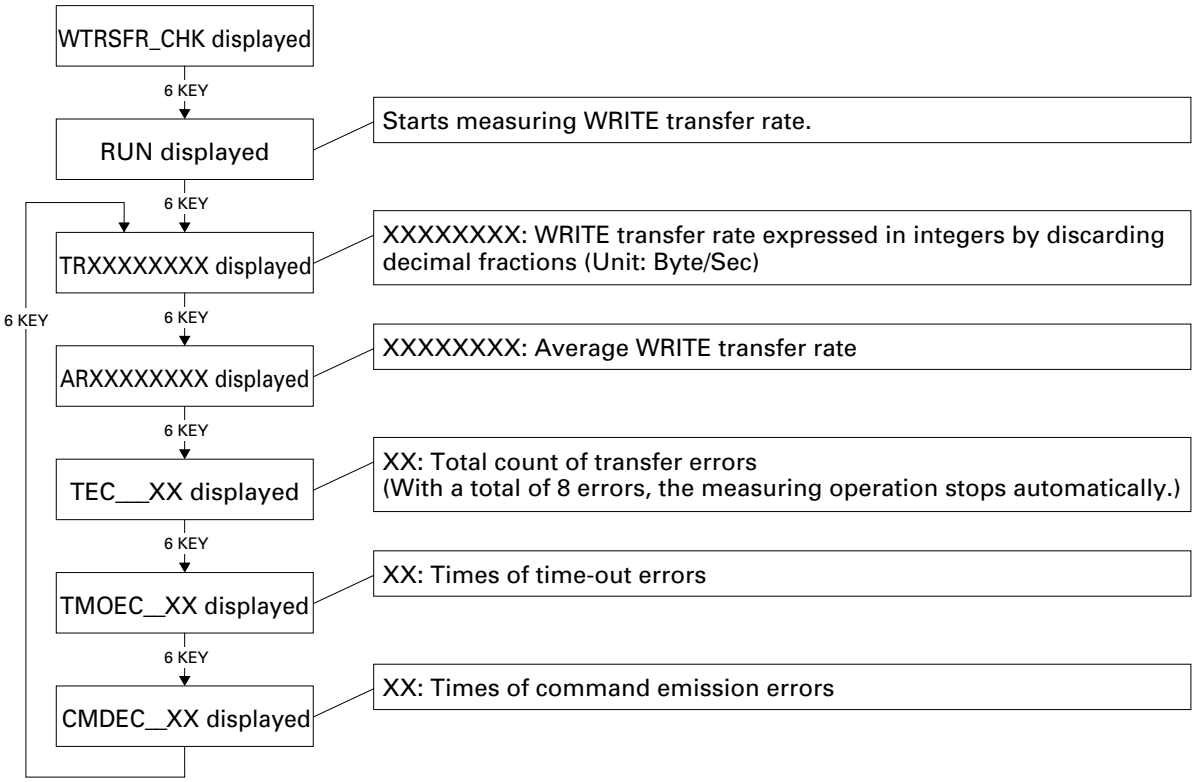
⑨ RTRSFR_CHK menu: HDD READ transfer rate check

This menu measures the READ data transfer rate by 16kByte.
At internals of three seconds, READ operation is performed repeatedly.
* The displayed values are expressed in hexadecimal number system.



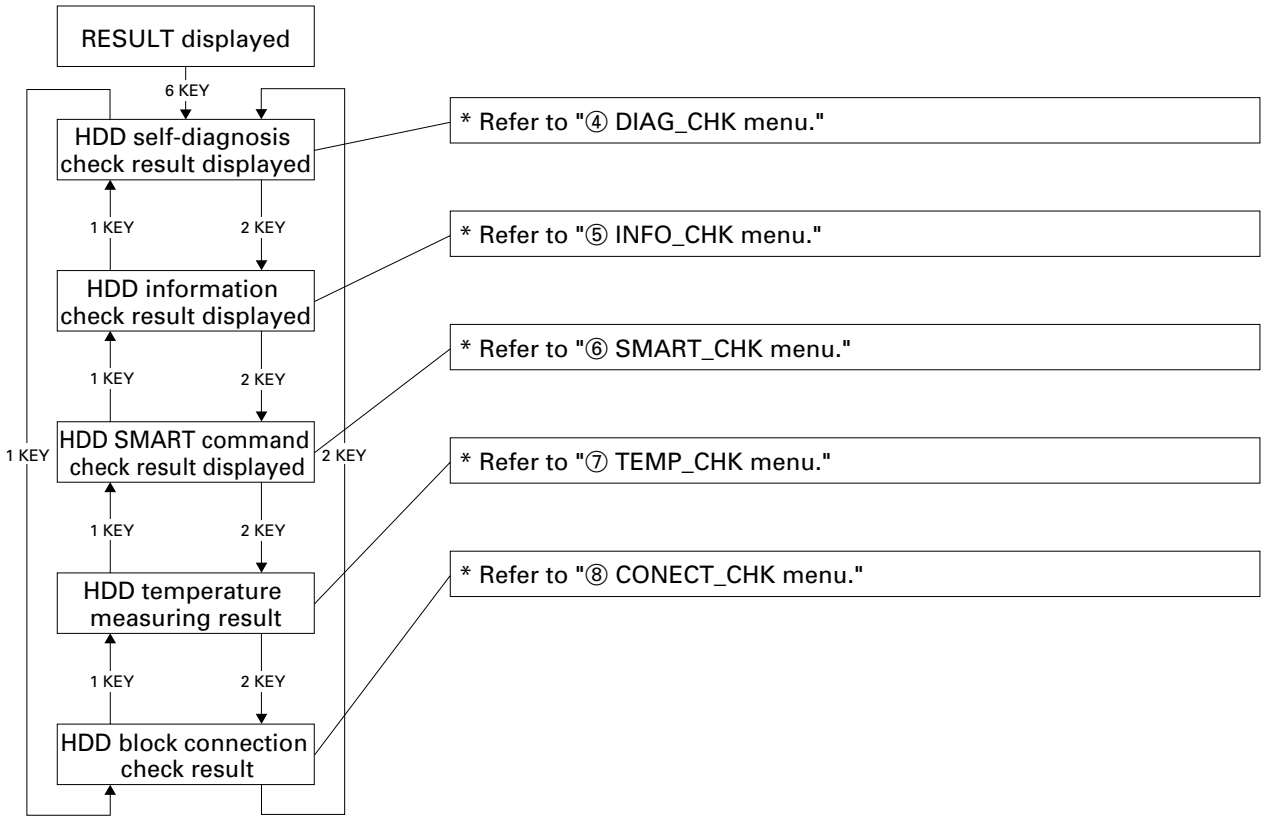
⑩ WTRSFR_CHK menu: HDD WRITE transfer rate check

This menu measures the WRITE data transfer rate by 16kByte.
At internals of three seconds, WRITE operation is performed repeatedly.
* The displayed values are expressed in hexadecimal number system.



⑪ RESULT menu: HDD test result status

This menu verifies and summarizes the check results from the DIAG_CHK, INFO_CHK, SMART_CHK, TEMP_CHK, and CONECT_CHK menus in the test mode.



● Error numbers with HDD

Error's name	General explanation and cause	Message on this unit
Not Available HDD	An HDD which cannot be used with this product is connected.	SERVER ERROR-23 (When Check-In) ERROR-23 (Otherwise)
Search Time Out	The destination sector in the HDD could not be reached within the given time.	SERVER ERROR-30 (When Check-In) ERROR-30 (Otherwise)
HDD Full	Additional recording of songs, updating CDDB (addition of differential data), etc. cannot be done because there is no or not enough free space left in the HDD.	M.Server full (When recording) ERROR-31 (When updating CDDB) HDD capacity is full (When updating CDDB)
Violation of copyright rules①	• Digital recording (copying) to the HDD cannot be done because the source contents are made with digital recording (copying) (violation of SCMS) • Digital recording (copying) to the HDD cannot be done because the source contents are "No More Copy" contents in SDMI Usage Rules. (violation of SDMI rules)	Can't copy
Data Write Error	Data could not be recorded to the HDD after given times of "Retry" operation.	WriteERR (When zoning other than FORM1, FORM2) ERROR-55 (When updating CDDB) SERVER WRITE ERROR (Otherwise)
Violation of copyright rules②	Digital recording (copying) to the HDD cannot be done unless you update this unit to a unit compatible with SDMI Phase 2 because the source contents "has a Trigger bit urging to shift from the screen of SDMI Phase 1 to the screen of SDMI Phase 2" (violation of SDMI②)	ERROR-56
PlayList Full ④	The newly recorded songs for an artist cannot be registered in any of the "Artist Playlist files" for the artist unless you delete one or more "Artist Playlist files" for the artist or songs in them because the maximum number of "Artist Playlist files" for an artist are made, and the maximum number of songs which Playlists can handle are registered in every Playlist file for the artist.	ERROR-5B
PlayList Full ⑤	No more recordings can be done for today unless you delete one or more "Playlist files for each recording date" for today or songs in them because the maximum number (16) of "Playlist files for each recording date" for one day are made, and the maximum number of songs which Playlists can handle are registered in every "Playlist file for each recording date" for today.	ERROR-5-
System Disorder	Disorder with the surrounding circuits (power supply, etc.) are detected while operating.	SERVER ERROR-A0 (When Check-In) ERROR-A0 (Otherwise)
No Digital Data	No digital data are input into the core module when digital input (TX) is selected when recording.	NO SIGNAL, ERROR-A2
Communication Error	• Reading data from/writing data to SRAM was not successful. (When playing compressed audio data recorded in the HDD such as ATRAC3.) • Communication between the HDD and the core module microcomputer was not successful. Error on communication of the microcomputer/LSI in the core module block such as ...↓ Cut of communication line, defective microcomputer/LSI, noises, etc.	SERVER ERROR-B0 (When Check-In) ERROR-B0 (Otherwise)

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the three screws and then Case.

● **Removing the CD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

(CAUTION)When reassembling the CD Mechanism Module, be sure to insert the black side of the FLEXIBLE PCB into the side of the CD Mechanism Module.

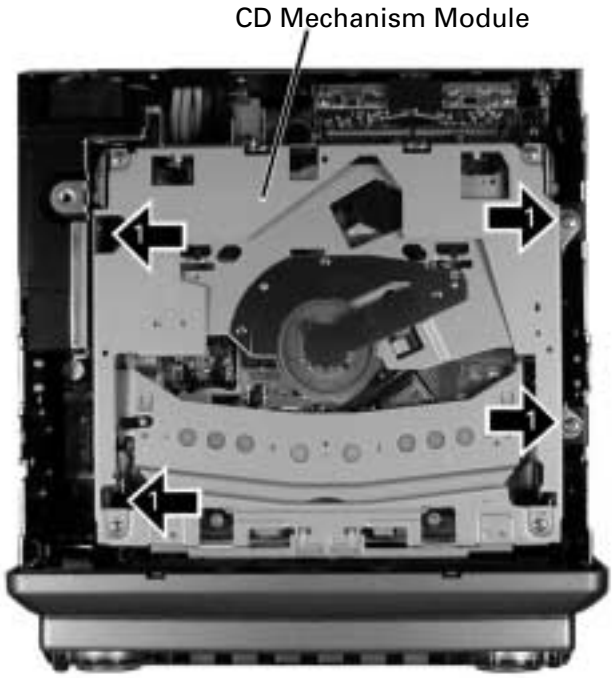


Fig.1

● **Removing the HDD (Fig.2)**

1 Remove the four screws.

Disconnect the connector and then remove the HDD.

(CAUTION)When fixing the HDD section to the lower case (CNC9348) with screws (BMZ30P040FMC), do not use an electric screwdriver.

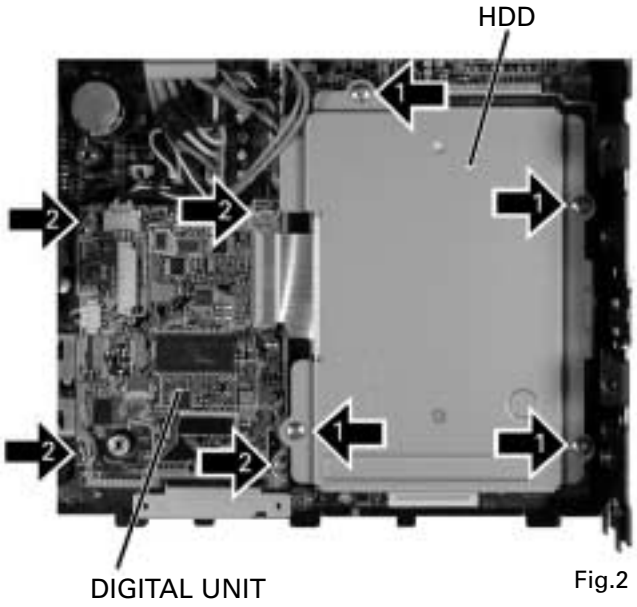


Fig.2

● **Removing the Panel Assy (Fig.3)**

1 Remove the two screws.

2 Remove the two screws.

3 Remove the three screws.

Remove every connector, then remove two tabs on the both sides and three tabs on the bottom, then pull the Panel Assy.
(CAUTION)When reassembling the Panel Assy, insert the FLEXIBLE PCB at the right side in the picture, then bend it inward.

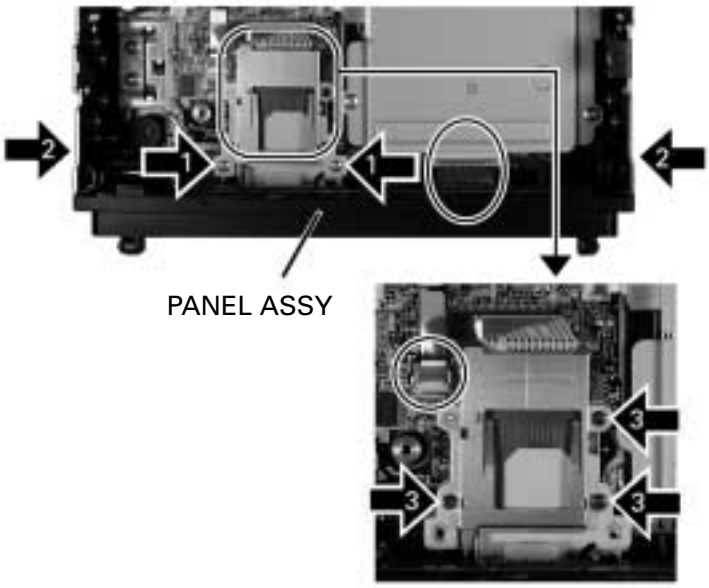


Fig.3

● **Removing the Digital Unit (Fig.2)**

2 Straight the tabs at four locations indicated.

Disconnect the connector and then remove the Digital Unit.

● **Removing the Tuner Amp Unit (Fig.4)**

1 Remove the screw.

2 Remove the two screws.

3 Straight the tabs at three locations indicated.

4 Remove the three screws.

5 Remove the two screws and then remove the Tuner Amp Unit.

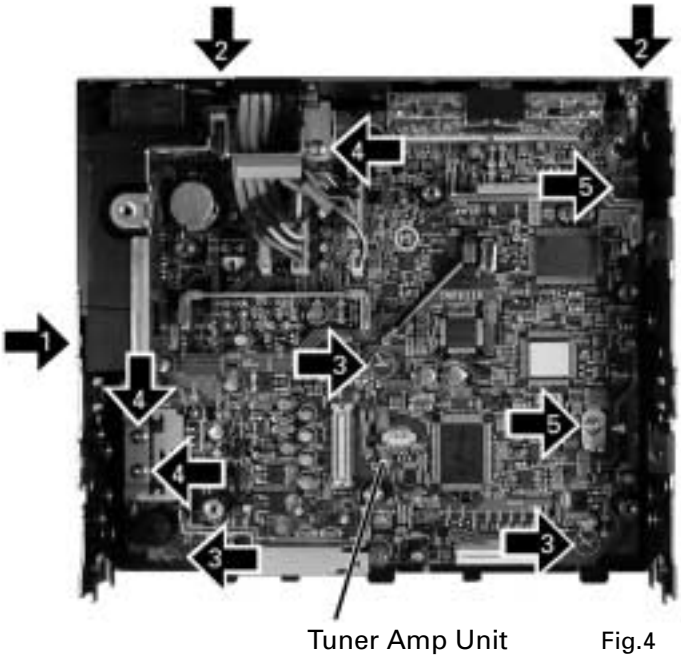


Fig.4

● **Removing the Power Supply Unit (Fig.5)**

Remove the two screws and then remove the Case.

1 Remove the three screws.

2 Straight the tabs at two locations indicated and then remove the Power Supply Unit.

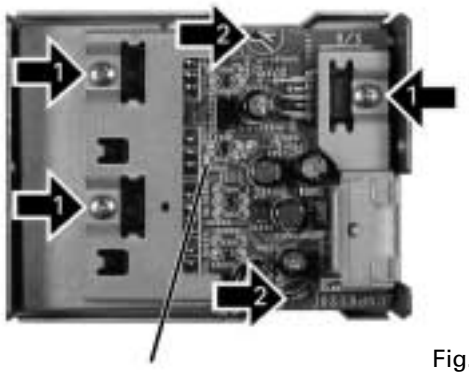
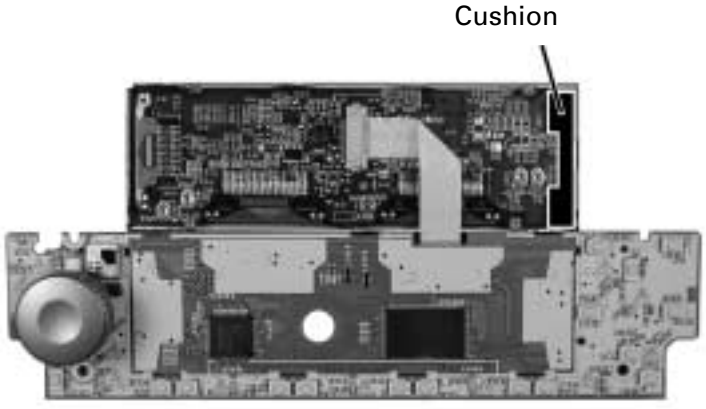


Fig.5

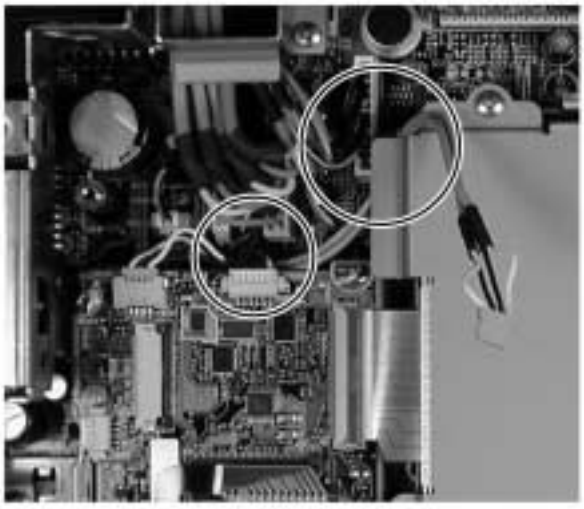
● **CAUTION on disassembling the unit**

Do not force anything to pieces because the OEL module and the keyboard unit adhere to each other with a Cushion.



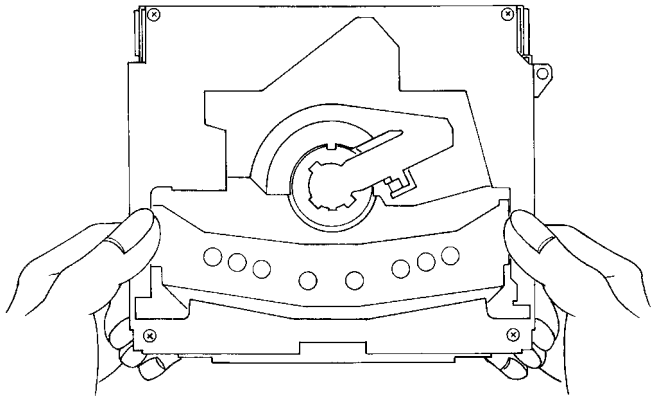
● **CAUTION on reassembling the unit**

When reassembling the CD Mechanism Module, arrange the cords as shown in the picture.



When reassembling the Digital Unit, arrange the cords as shown in the picture.

The numeral enclosed by a circle in the drawing indicates the order of removal.

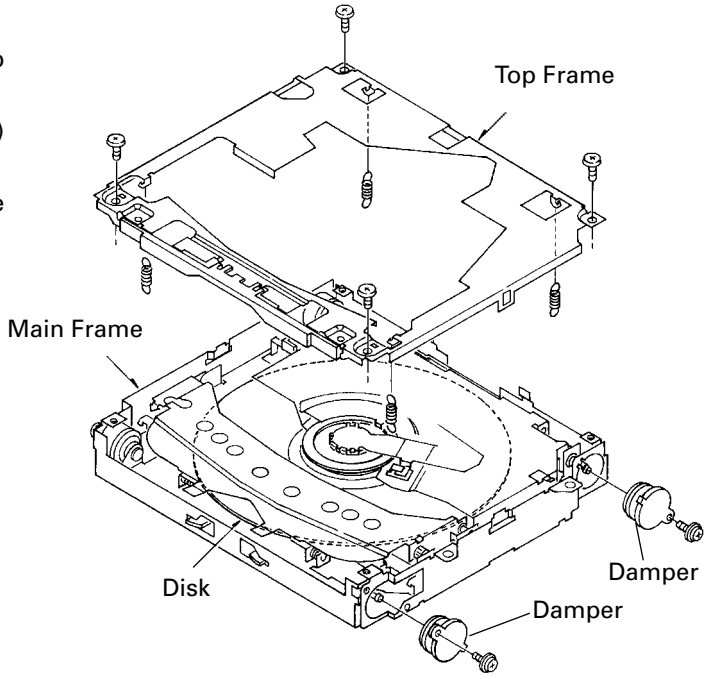


● How to hold the mechanism unit

1. Hold the top frame and main frame.
2. Do not hold the front of the top frame tightly because its strength is low.

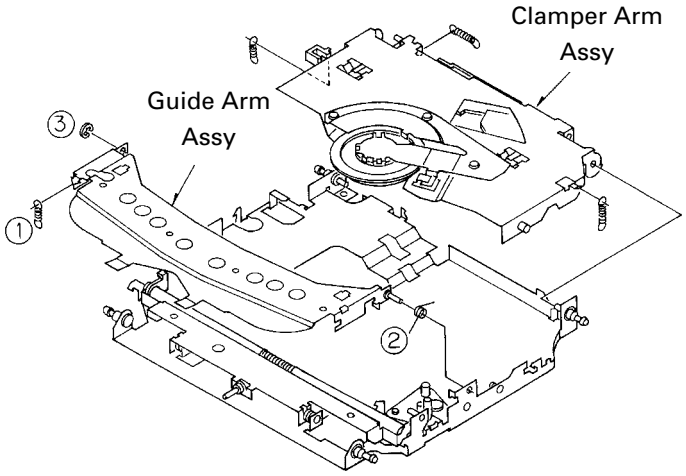
● How to remove the top frame and main frame

1. Remove the screws (4) and screws (2) of the top frame in the clamped state and remove the top frame.
2. After having removed the screws of the dampers (2) on the right and the dampers, remove the main frame.
3. Remount the product connector with the frame removed and eject a disk.



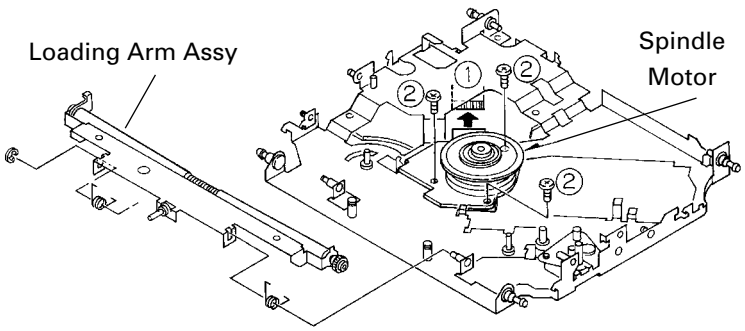
● How to remove the clamper arm assy and guide arm assy

1. Remove a total of three right, left and rear screws and remove the clamper assy.
2. Remove the left spring and remove the torsion spring hook of the right fulcrum unit.
3. Remove the E ring of the left fulcrum and remove the guide arm assy.



● How to remove the loading arm assy and spindle motor

1. Remove the E ring of the left fulcrum and remove the spring and loading arm assy.
2. Remove the connector of the spindle motor and remove the mounting screws (3).



● How to remove the loading motor assy

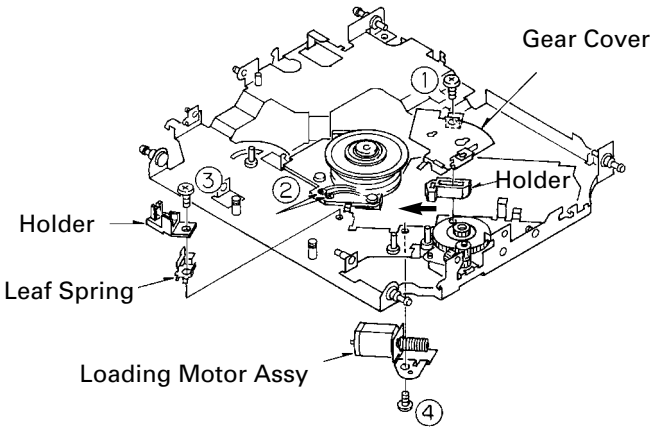
1. Remove the gear cover screw and remove the gear cover.
2. Remove the holder which was tightened together with the gear cover.

(Note):

At assembly, tighten the holder together with the gear cover by approaching the holder to the arrow view direction and touching the tip of the motor shaft.

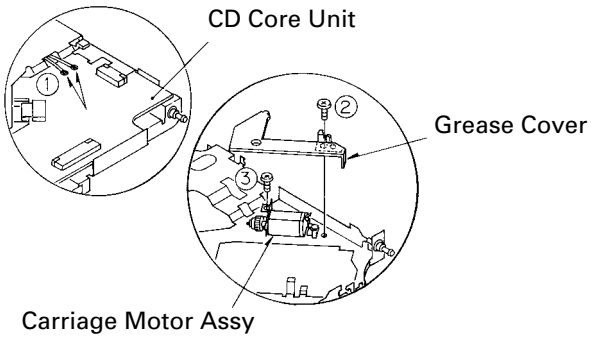
At that time, if the holder is tightened with screws while it is being pressed, the motor load is increased and causes an error (NG). While the holder is approached, separate the hand from the holder and the holder is tightened with the screws.

3. Remove the solder of the motor lead wire.
4. Remove the leaf spring screw and remove the holder and leaf spring.
5. Put the mechanical unit face downward, remove the mounting screws of the loading motor assy and remove the loading motor assy.



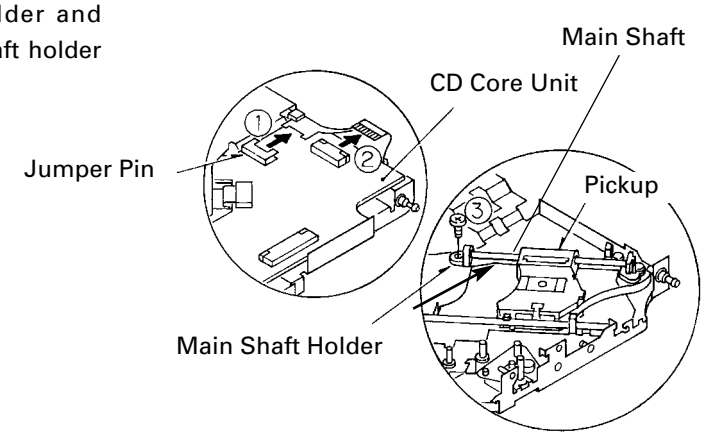
● How to remove the carriage motor assy

1. Remove the solder of the carriage motor lead wire.
2. Remove the grease cover screw and remove the grease cover.
3. After having removed the lead wire processing of the motor, remove the mounting screw of the carriage motor assy.

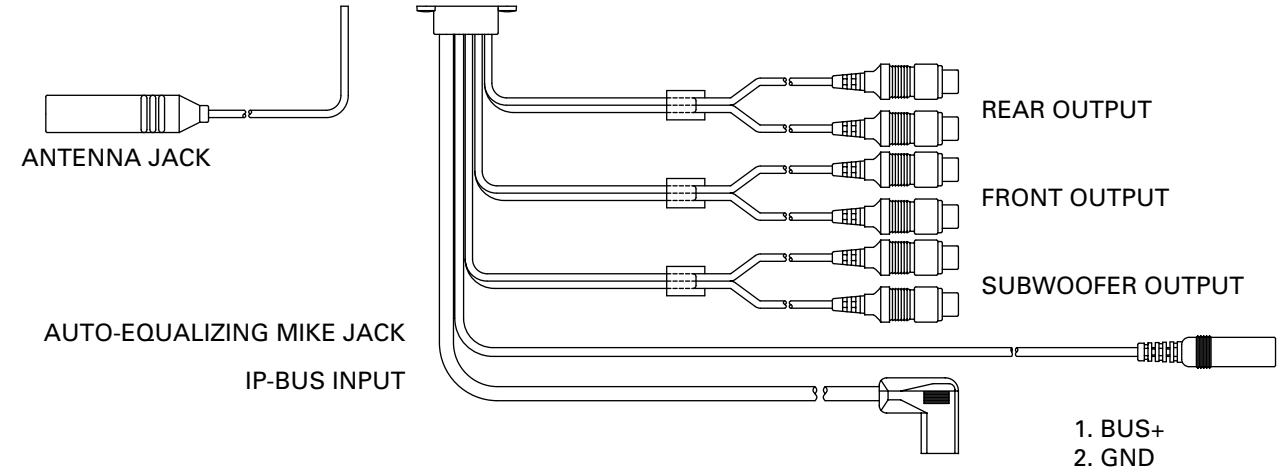


● How to remove the pickup

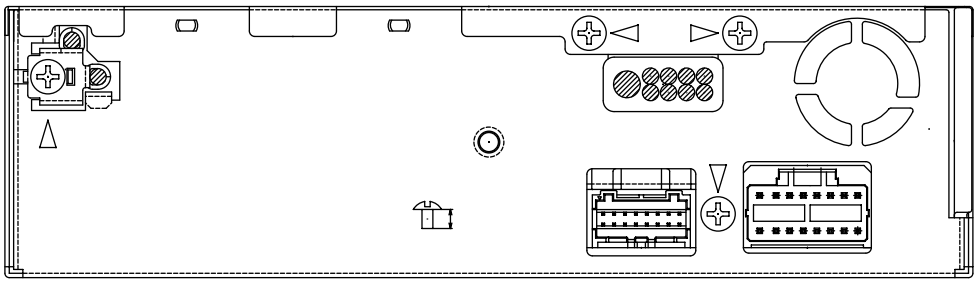
1. Mount the jumper pin and remove the pickup connector.
2. After having the processing of flexible wires, remove the mounting screw of the main shaft holder and remove the pickup together with the main shaft holder and the main shaft.



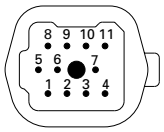
7.1.2 CONNECTOR FUNCTION DESCRIPTION



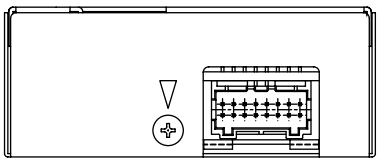
1. BUS+
2. GND
3. GND
4. NC
5. BUS-
6. GND
7. BUS L+ INPUT
8. ASENB
9. BUS R+ INPUT
10. BUS R- INPUT
11. BUS L- INPUT

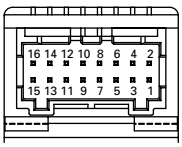


IP-BUS INPUT

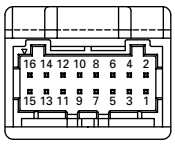


POWER BOX

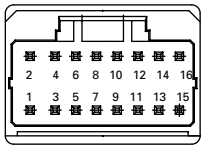




1. SYS +B
2. SYS +B GND
3. SYS PW
4. ATA 5V
5. BOX SENS
6. ATA 5V GND
7. ATA PW
8. VD
9. VD CONT
10. VD GND
11. OEL PW
12. OEL +B
13. MUTE1
14. OEL GND
15. GND
16. B.UP



1. GND
2. B.UP
3. MUTE1
4. OEL GND
5. OEL PW
6. OEL +B
7. VD CONT
8. VD GND
9. ATA PW
10. VD
11. BOX SENS
12. ATA 5V GND
13. SYS PW
14. ATA 5V
15. SYS +B
16. SYS +B GND



1. B.UP
2. GND
3. ILL
4. B.REM
5. ACC
6. NC
7. NC
8. MUTE
9. RL-
10. FL-
11. RL+
12. FL+
13. RR-
14. FR-
15. RR+
16. FR+

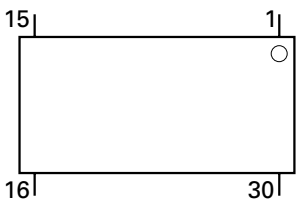
7.2 IC

TA2153FN	NJU7223DL1-33	TC74VHC157FT	CXD1859AR
TC9495F2	NJM2870F18	AK5353VT	PD5646A
PE5273A	TC74VHC126FT	S-80818ANUP-EDF	PD5647A
BA5811FM	PML011A	LC78683ES	
PD5658A	PD5704A	TC74LCXR163245FT	
PD6364A	PDG262A	PE5218C	
PD8081A	TC74VHCT125AFT	TC55V16100FTI-15	
PD3428A	TC74LVXC3245FS	CXK2000EN	

● **Pin Functions (TA2153FN)**

Pin No.	Pin Name	I/O	Function and Operation
1	VCC	-	Power supply voltage terminal
2	RFGC	I	RF amplitude adjustment control signal terminal
3	GMAD	I	AGC amplifier frequency characteristic adjustment terminal
4	FNI	I	Main beam amplifier input terminal
5	FPI	I	Main beam amplifier input terminal
6	TPI	I	Sub beam amplifier input terminal
7	TNI	I	Sub beam amplifier input terminal
8	MDI	O	Monitor photodiode amplifier input terminal
9	LDO	I	Laser diode amplifier output terminal
10	SEL	I	APC circuit ON/OFF signal, LDO terminal control input terminal and bottom and peak detection frequency switching terminals
11	TEB	I	Tracking error balance adjustment signal input terminal
12	2VRO	O	Reference voltage (2VRO) output terminal
13	TEN	I	Tracking error signal generation amplifier reverse phase input terminal
14	TEO	O	Tracking error signal generation amplifier output terminal
15	SBAD	O	Sub beam addition signal output terminal
16	FEO	O	Focus error signal generation amplifier output terminal
17	FEN	I	Focus error signal generation amplifier reverse phase input terminal
18	SEB	I	RFRP generation circuit mode switching terminal
19	VRO	O	Reference voltage (VREF) output terminal
20	RFRP	O	Signal generation amplifier output terminal for track count
21	BTC	I	Bottom detection time constant adjustment terminal for RFCT signal generation
22	RFCT	O	RFRP signal center level output terminal
23	PKC	I	Peak detection time constant adjustment signal for RFCT signal generation
24	RFRPIN	I	Signal generation amplifier input terminal for track count
25	RFGO	O	RF signal amplitude adjustment amplifier output terminal
26	GVSW	I	AGC, FE or TE amplifier gain switching terminal
27	AGCIN	I	RF signal amplitude adjustment amplifier input terminal
28	RFO	O	RF signal generation amplifier output terminal
29	GND	I	GND terminal
30	RFN2	I	RF signal generation amplifier input terminal

TA2153FN

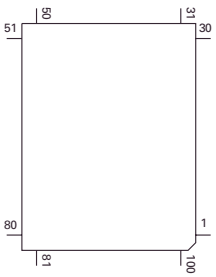


● **Pin Functions (TC9495F2)**

Pin No.	Pin Name	I/O	Function and Operation
1	TESTO		Test mode terminal
2	HSO	O	Replay speed flag output terminal
3	UHSO	O	Replay speed flag output terminal
4	EMPH	O	Emphasis flag output terminal for sub code Q data
5	LRCK	O	Channel clock (44.1 kHz) output terminal
6	Vss		Digital ground terminal
7	BCK	O	Bit clock output terminal
8	AOUT	O	Digital audio data output terminal
9	DOUT	O	Digital out output terminal
10	MBOV	O	Buffer memory over signal output terminal
11	IPF	O	Correction flag output terminal
12	SBOK	O	CRCC decision result output for sub code Q data
13	CLCK	I/O	Clock input/output terminal for sub code P-W data read
14	VDD		Digital + power supply terminal (5 V)
15	Vss		Digital ground terminal
16	DATA	O	Sub code P-W data output terminal
17	SFSY	O	Replay-system frame sync signal output terminal
18	SBSY	O	Sub code block sync output terminal
19	SPCK	O	Clock for processor status signal read
20	SPDA	O	Processor status signal output terminal
21	COFS	O	Correction-system frame clock (7.35 kHz) output terminal
22	MONIT	O	LSI internal signal output terminal
23	VDD		Digital + power supply terminal (5 V)
24	TESIO0	I	Test input/output terminal
25	P2VRFF		PLL-system only 2VREF terminal
26	HSSW	O	The VREF voltage is reached for double or quad speed.
27	ZDET	O	One-bit DAC zero detection flag output terminal
28	PDO	O	Phase error signal issue between the EFM and PLCK signals
29	TMAXS	O	TMAX detection result output terminal
30	TAMX	O	TMAX detection result output terminal
31	LPFN	I	Reverse input terminal of amplifier for lowpass filter
32	LPFO	O	Output terminal of amplifier for lowpass filter
33	PVREF		PLL-system only VREF terminal
34	VCOREF	I	VCO center frequency reference level terminal
35	VCOF	O	Filter terminal for VCO
36	Avss		Analog-system ground terminal
37	SLCO	O	Output terminal of DAC for data slice level generation
38	RFI	I	RF signal input terminal
39	AVDD		Analog-system power supply terminal (5 V)
40	RFCT	I	RFRP signal center level input terminal
41	RFZI	I	Input terminal for RFRP signal zero cross
42	RFRP	I	RF ripple signal input terminal
43	FEI	I	Focus error signal input terminal
44	SBAD	I	Sub beam addition signal input terminal
45	TSIN	I	Test input terminal
46	TEI	I	Tracking error input terminal
47	TEZI	I	Input terminal for tracking error or zero cross
48	FOO	O	Focus equalizer output terminal
49	TRO	O	Tracking equalizer output terminal
50	VREF		Analog reference power supply terminal
51	RFGC	O	RF amplitude adjustment control signal output terminal
52	TEBC	O	Tracking balance control signal output terminal
53	FMO	O	Feed equalizer output terminal
54	FVO	O	Speed error signal or feed search EQ output
55	DMO	O	Disc equalizer output terminal
56	2VREF		Analog reference power supply terminal
57	SEL	O	APC circuit ON/OFF signal output terminal

Pin No.	Pin Name	I/O	Function and Operation
58	FLGA	O	External flag output terminal for internal signal monitor
59	FLGB	O	External flag output terminal for internal signal monitor
60	FLGC	O	External flag output terminal for internal signal monitor
61	FLGD	O	External flag output terminal for internal signal monitor
62	VDD		Digital + power supply terminal (5 V)
63	Vss		Digital ground terminal
64	IO0	O	RF amplifier gain switching terminal
65	IO1	O	Not used
66	IO2	I	HOME detection switch input terminal
67	IO3	O	FocusDrv and signal output terminal
68	DMOUT	I	Not used
69	CKSE	I	Usually open
70	DACT	I	DAC test mode terminal
71	TESIN	I	Test input terminal
72	TESIO1	I	Test input/output terminal
73	Vss		Digital ground terminal
74	PXI	I	DPS-system clock oscillator circuit input terminal
75	PXO	O	DPS-system clock oscillator circuit output terminal
76	VDD		Digital + power supply terminal (5 V)
77	Xvss		Ground terminal for system clock oscillator circuit
78	XI	I	System clock oscillator circuit input terminal
79	XO	O	System clock oscillator circuit output terminal
80	XVDD		For system clock oscillator circuit + power supply terminal
81	DVSR		R channel D/A converting unit power supply terminal
82	RO	O	R channel data forward rotation output terminal
83	DVDD		D/A converting unit power supply terminal (5 V)
84	DVR		Reference voltage terminal
85	LO	O	L channel forward rotation output terminal
86	DVSL		L channel D/A converting unit power supply terminal
87	TEST1	I	Test mode terminal
88	TEST2	I	Test mode terminal
89	TEST3	I	Test mode terminal
90	BUS0	I/O	Data input/output terminal for microcomputer interface
91	BUS1	I/O	Data input/output terminal for microcomputer interface
92	BUS2	I/O	Data input/output terminal for microcomputer interface
93	BUS3	I/O	Data input/output terminal for microcomputer interface
94	VDD		Digital + power supply terminal (5 V)
95	Vss		Digital ground terminal
96	BUCK	I	Clock terminal for microcomputer interface
97	CEE	I	Chip enable signal for microcomputer interface
98	TEST4	I	Test mode terminal
99	TSMOD	I	Test mode terminal
100	RST	I	Reset signal input terminal

*TC9495F2



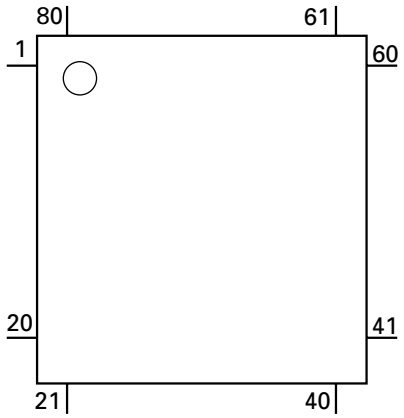
IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

● **Pin Functions (PE5273A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	$\overline{\text{BSCK}}$	I/O	/C	P-Bus serial clock input/output
2	BDATA	I/O	/C	P-Bus serial data input/output
3	CONT	O	C	Servo driver power supply control output
4	CDLOAD	O	C	Load/Eject motor load control output
5	CDEJET	O	C	Load/Eject motor eject control output
6	NC			Not used (Open)
7	$\overline{\text{RESET}}$			Chip reset
8	VDD1			Positive power supply of parts other than ports (make potential the same as that of VDD0)
9	X2			Connection for crystal oscillating system clock
10	X1	I		Connection for crystal oscillating system clock
11	VSS1			GND for parts other than ports (make potential the same as that of VSS0)
12-14	CBANK0-2	O	C	COMP IC bank setting output 0-2
15	$\overline{\text{CRST}}$	O	C	COMP IC reset output
16-18	NC			Not used (Open)
19	SUBOK	O	C	Output for sub code information being OK
20,21	NC			Not used (Open)
22	DSET	O	C	Light output for disc set indicator
23,24	NC			Not used (Open)
25	DSPMUTE	O	C	DOUT Mute output
26-28	NC			Not used (Open)
29	BRXEN	I/O	/C	P-Bus receivability input/output
30	NC			Not used (Open)
31	CD5VON	O	C	CD+5V power supply control output
32,33	NC			Not used (Open)
34	$\overline{\text{EMPH}}$	O	C	Emphasis information output
35	NC			Not used (Open)
36	$\overline{\text{XRST}}$	O	C	CD LSI reset output
37	NC			Not used (Open)
38	$\overline{\text{XCE}}$	O	C	CD LSI chip enable output
39	XPCK	O	C	CD LSI clock output
40-43	XPIO3-0	I/O	/C	CD LSI data input/output 3-0
44	NC			Not used (Open)
45	VSS0			GND for ports (make potential the same as that of VSS1)
46	NC			Connected directly to VSS0
47	NC			Not used (Open)
48	VDCONT	O	C	VD power supply control output
49	$\overline{\text{CSENS}}$	I		Flap close sense input
50,51	NC			Not used (Open)
52	$\overline{\text{BSRQ}}$	I/O	/C	P-Bus polling demand output
53,54	NC			Not used (Open)
55	VDD0			Positive power supply of ports (make potential the same as VDD1)
56	NC			Not used (Open)
57	VDSENS			VD power supply sense input
58	TEMP			Temperature sense input
59	DSCSNS			Mechanism SW sense input
60	NC			Not used (Open)
61	$\overline{\text{ADENA}}$	O	C	A/D reference voltage supply control output
62,63	NC			Not used (Open)
64	AVDD			Positive power supply for A/D converter
65	AVREF1			Reference voltage impression for A/D converter
66	AVSS			GND for A/D converter
67,68	NC			Not used (Open)
69-71	NC			Connected to VSS0

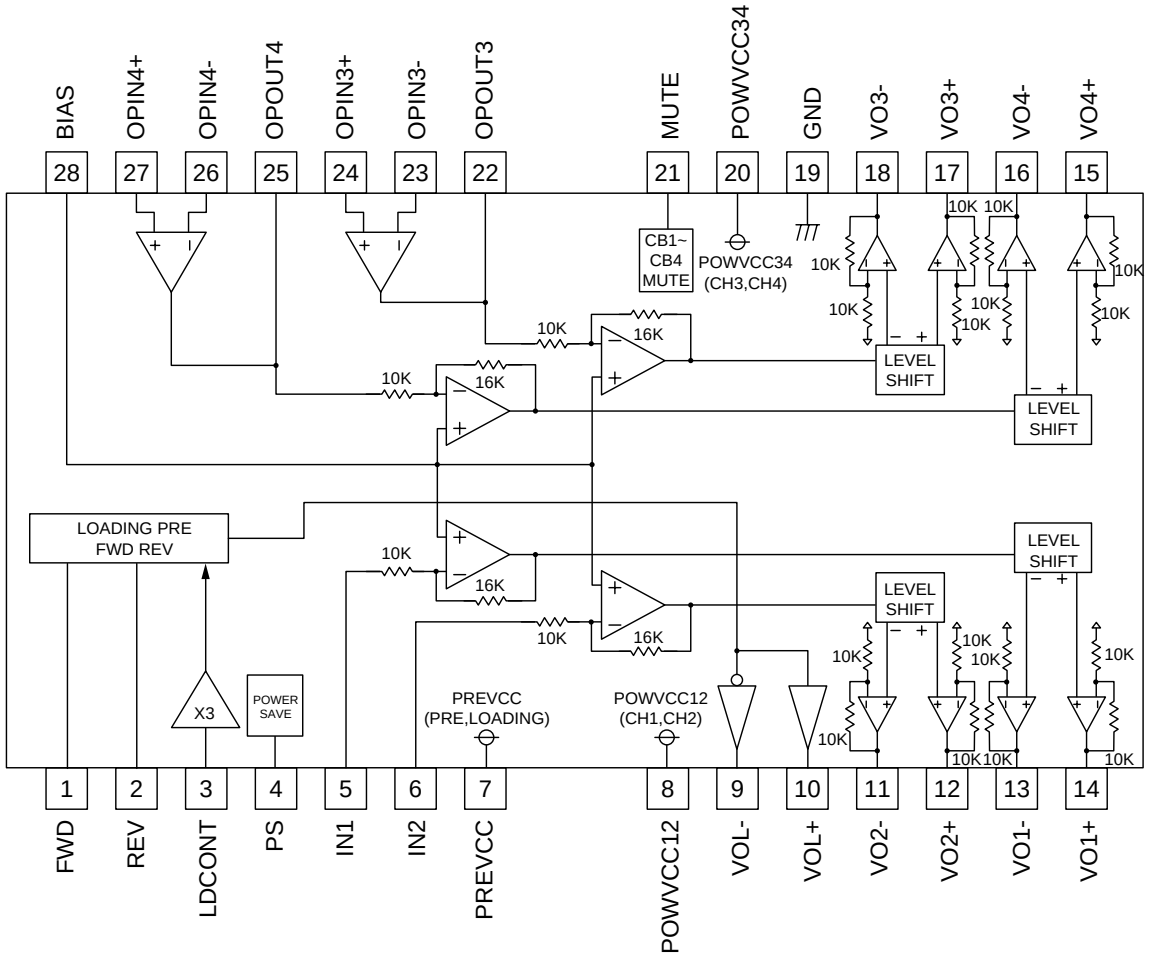
Pin No.	Pin Name	I/O	Format	Function and Operation
72	$\overline{\text{TESTIN}}$	I		Test program start input
73	SPDLFG			FG pulse signal input
74-76	NC			Connected to VDD0
77	$\overline{\text{BRST}}$			P-Bus reset input
78	NC			Connected to VDD0
79,80	NC			Not used (Open)

* PE5273A



Format	Meaning
C	C MOS

BA5811FM

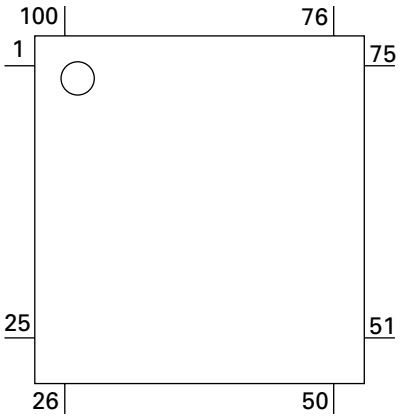


● **Pin Functions(PD5658A)**

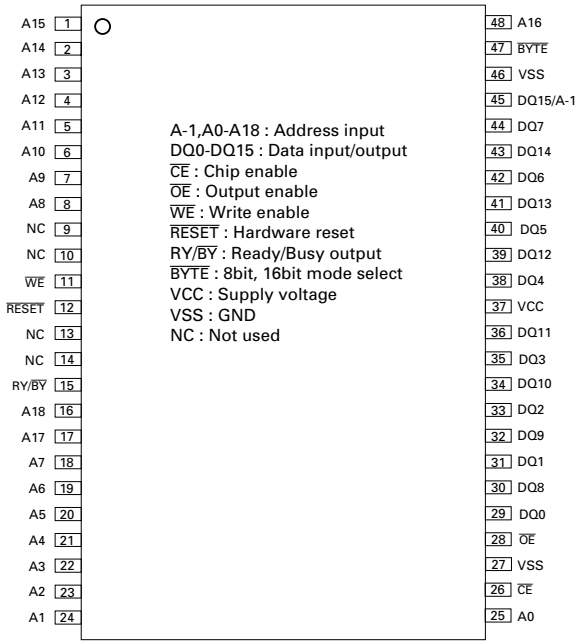
Pin No.	Pin Name	I/O	Format	Function and Operation
1	NC	O		(OPEN)
2	BSCK	O	C	Output of clock (ROM correction)
3	CS	O	C	Output of chip selection (ROM correction)
4-6	NC	O	C	(OPEN)
7	REMin	I		Reception of remote control
8	BYTE	I		Switching between the external data buses
9	CNVss	I		Processor mode (GND)
10-11	NC	O	C	(OPEN)
12	RESET	I		SW Vdd
13	Xout	O	C	Connected to the oscillator
14	Vss1			GND
15	Xin	I		Connected to the oscillator
16	Vcc1			Vcc
17	NMI	O	C	Input of NMI(Vdd pullup)
18-26	NC	O	C	(OPEN)
27-30	KS3-0	I/O	C	Key strobe 3-0
31	KEYDT	O	C	Output of KEY data
32	DISPDT	I	C	Input of data to be displayed
33	NC	O	C	(OPEN)
34	Spstb	O	C	Request for DSP data
35	NC		C	Not used
36	Spdin	I	C	Input of DSP data
37	NC		C	Not used
38	FLBUSY	I		Flash EP-ROM BUSY
39	RDY	I	C	Input of OEL controller ready
40	NC	O		(OPEN)
41	HOLD	I	C	(Vcc pullup)
42	NC	O		(OPEN)
43	BCLK	O		Bus clock
44	RD	O	C	RD pin
45	NC	O		(OPEN)
46	WR	O		WR pin
47-48	CS0-1	O		Chip selection
49-61	A21-9	O		Address bus
62	Vcc2			Vcc
63	A8	O		Address bus
64	Vss2			GND
65-71	A7-1	O		Address bus
72	NC	O		(OPEN)
73-75	D15-13	I/O	C	Data bus
76-88	D12-0	I/O		Data bus
89	NC	O		(OPEN)
90	OELON	O		OEL_ON
91	STBY	O		Flash EP-ROM standby
92	FL12ON	O		Flash EP-ROM 12V on
93-95	KD3-1	I		Key data 3-1
96	Avss			GND
97	KD0	I		Key data 0
98	NC			GND
99	Vcc3			Vcc
100	BSDATA	I/O	C	Input/Output of data (ROM correction)

Format	Meaning
C	C MOS

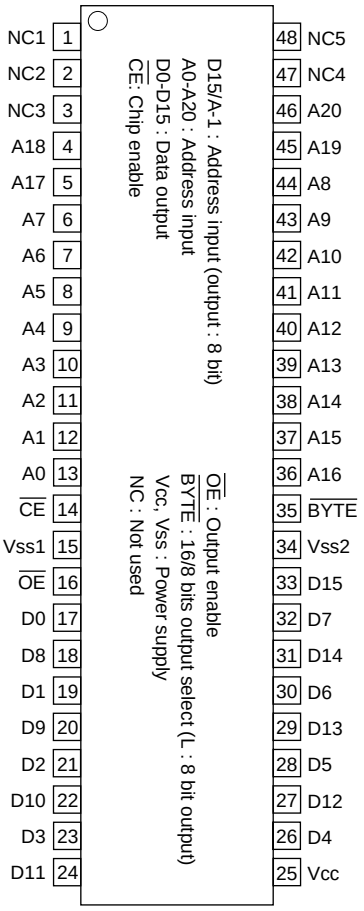
* PD5658A



* PD6364A



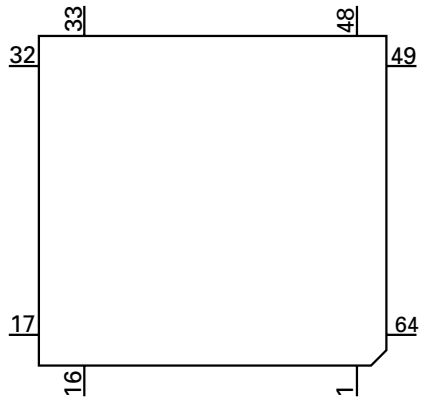
* PD8081A



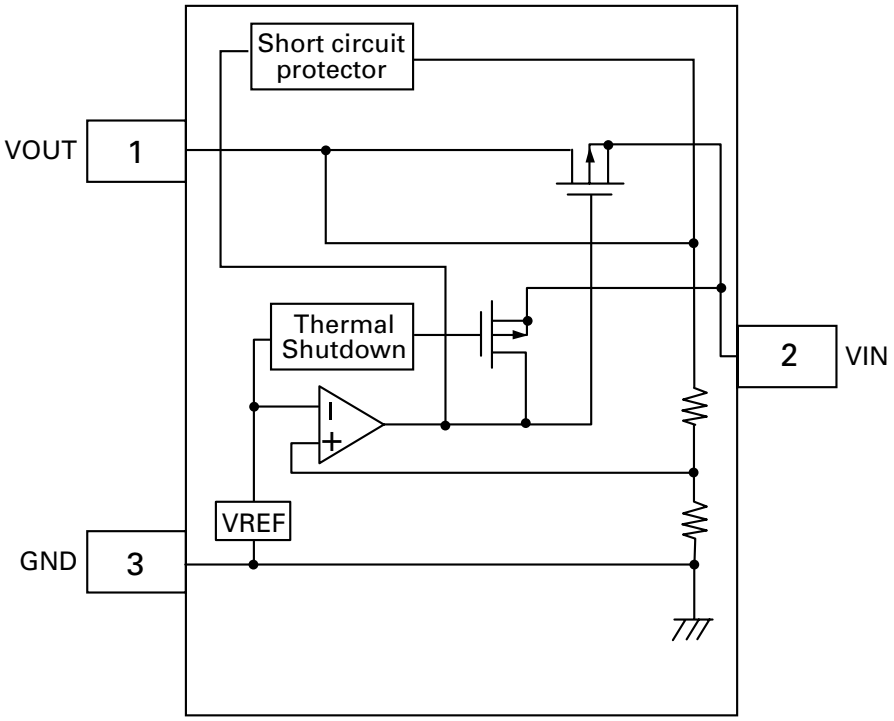
● **Pin Functions(PD3428A)**

Pin No.	Pin Name	I/O	Function and Operation
1-9	DB7-15	I/O	Data bus IO
10	GND		Ground
11	XIN		Input of oscillation buffer
12	XOUT		Output of oscillation buffer
13	VCC5		Power supply (5V, for X'tal pad)
14	CKSEL	I	Input for selection of system clock
15	IR	I	Input for selection of instruction resistor
16	CS1	I	Input of CPU CS1
17	CS0B	I	Input of CPU CS0B
18	WRB	I	Input of CPU write strobe
19	RDB	I	Input of CPU read strobe
20	BCLK	I	Input of CPU bus clock
21	GND		Ground
22	RDYB	O	Output of ready signals
23	CSOUT	O	Output for of external chip selection
24	CKD	O	Output of transfer clock of serial data
25	CKA	O	Output of drive clock of positive pole
26	VCC5		Power supply (5V, for I/O)
27	LS	O	Output of line synchronization signals
28,29	ADL0,1	O	Output of serial data of positive pole 0,1(for column 0 - 127)
30,31	ADR0,1	O	Output of serial data of positive pole 0,1(for column 128 - 255)
32	CDL	O	Output of serial data of negative pole (for left TAB)
33	CDR	O	Output of serial data of negative pole (for right TAB)
34-37	NC		Not used
38,39	VCC3		Power supply (3V, for 3.3V core)
40	NC		Not used
41,42	GND		Ground
43	TESTRAM	I	Input of settings of macro test mode of internal RAM
44	TESTSEL0	I	Input of settings of display test pattern 0
45	TESTSEL1	I	Input of settings of display test pattern 1
46	SCANSEL	I	Input for selection of vertical display size of display test
47	OBKSEL	I	Input for selection of ghost refresh rate of display test
48-54	NC		Not used
55	RB	I	Input of reset
56	GND		Ground
57	DB0	I/O	Data bus IO
58	VCC5		Power supply (5V, for I/O)
59-64	DB1-6	I/O	Data bus IO

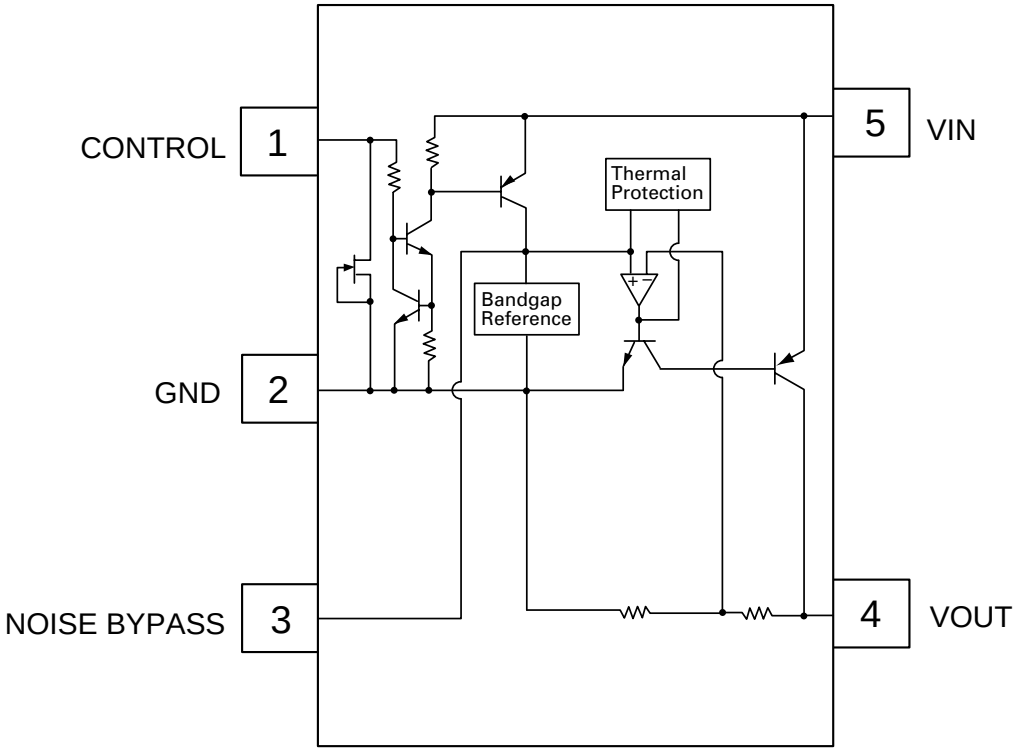
* PD3428A



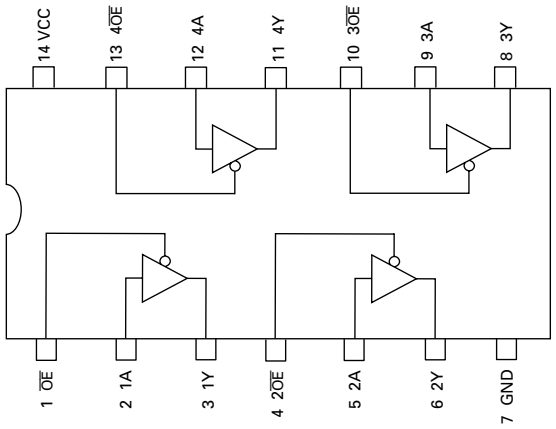
NJU7223DL1-33



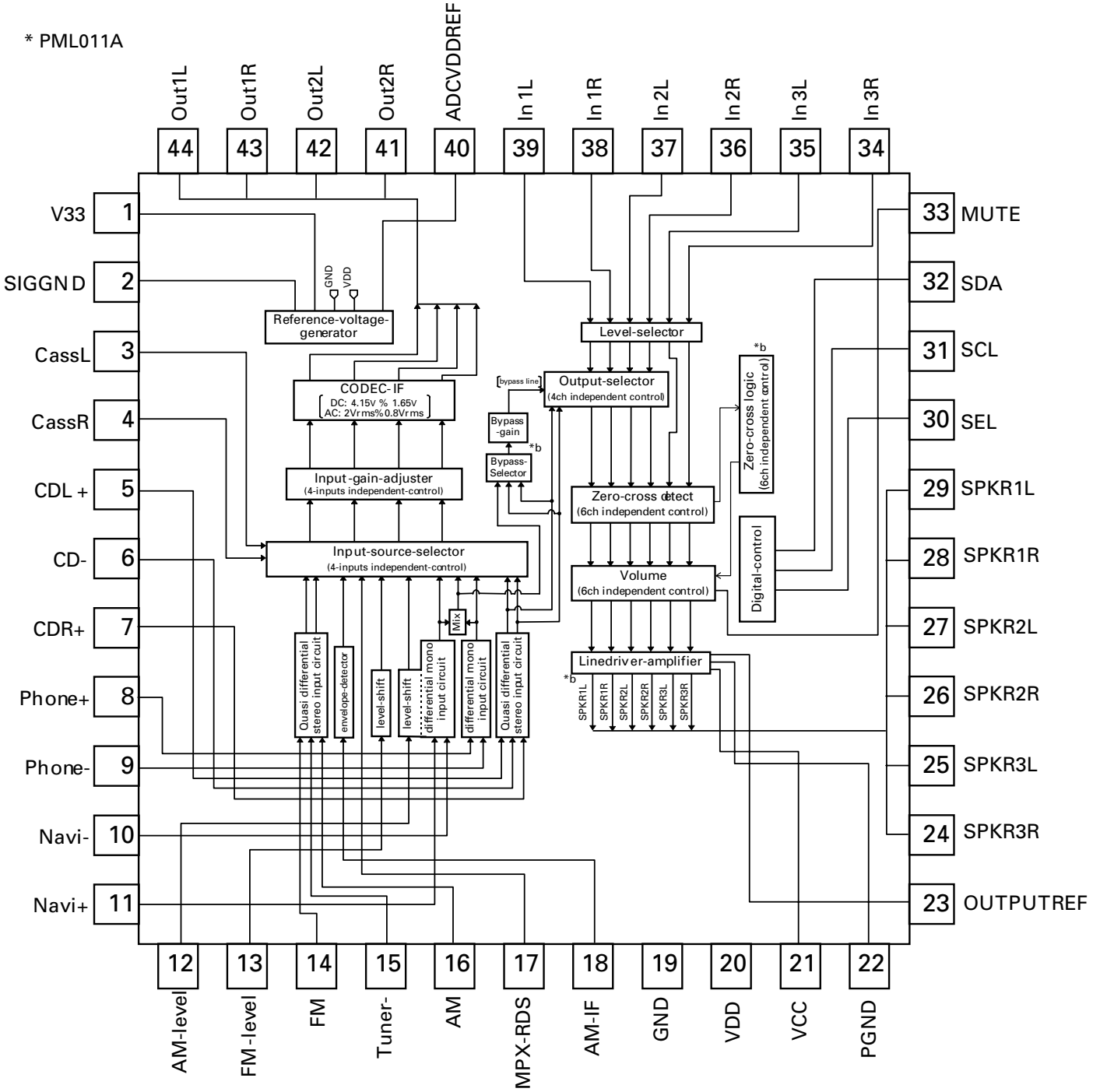
NJM2870F18



* TC74VHC126FT



* PML011A

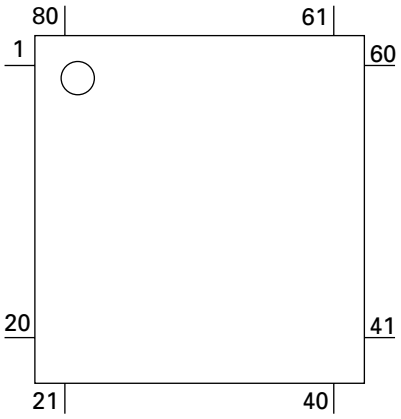


● **Pin Functions(PD5704A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1-2	NC		C	Not used
3	VST	O	C	Output of electronic volume strobe
4	VDT	O	C	Output of electronic volume data
5	VCK	O	C	Output of electronic volume clock
6				CNVss
7	MCKRQ	I	C	Input of request for master clock
8	MUTERQ	O	C	Output of hard muting
9		I		Input of hard reset of the microcomputer
10		O		Output of system clock
11				GND for the microcomputer
12		I		Input of system clock (10MHz)
13				Power supply to the microcomputer
14	NC			Not used (1k pullup)
15	BMUTEIN	I	C	Information on digital source clock error
16	SPRQ	I	C	Input of spectrum analizer request
17	BRST	I	C	Input of PBUS reset
18	AQTEST	I	C	Request for starting AEQ evaluation mode
19	MUTEIN	I	C	Input of information on system muting
20-22	NC			Not used
23	SPDT	O	C	Output of data of spectrum analizer
24	DSPOUT	O	C	Output of DSP serial data
25	DSPIN	I	C	Input of DSP serial data
26	DSPCK	O	C	Output of DSP serial clock
27	NC			Not used
28	BSO	O	C	Output of PBUS serial data
29	BSI	I	C	Input of PBUS serial data
30	BSCK	I/O	C	Input/output of PBUS serial clock
31	NC			Not used
32	BSRQ	I/O	C	PBUS service request
33	BRXEN	I/O	C	PBUS receivable information
34	NC			Not used
35	DSPON	O	C	Information on completion of DSP initialization
36	CD_ANLG	I	C	Information on CD digital analog
37	CDFS1	I	C	Information on CD/MP3 sampling 2
38	CDFS0	I	C	Information on CD/MP3 sampling 1
39	TESTIN	I	C	Request for starting test program
40	DSPPW	O	C	Output of power supply to DSP
41	NC			Not used
42	MICSENS	I	C	Input of microphone sensing
43	DSENS	I	C	Information on detaching the front panel
44-49	NC			Not used
50	ROTB	I	C	Input of information on rotary volume B
51	ROTA	I	C	Input of information on rotary volume A
52	NC			Not used
53	DACPD	O	C	Switching of DAC power
54	DACDEM1	O	C	Switching of DAC de-emphasis 2
55	DACDEM0	O	C	Switching of DAC de-emphasis 1
56	PLCKOUT	O	C	Request for output of PLL clock
57	FSSEL	O	C	DSP: output of request for switching of FS
58	MCKRQ2	I	C	HDD,MS: request for clock while REC
59	MODEL	I	C	Information identifying the model
60	DSPRST	O	C	System reset of SONY DSP
61	MCKOUT	O	C	Request for output of master clock
62	LEV_CH	O	C	Information on average level of spectrum analizer
63	DSPMS	O	C	Switching between master/slave of SONY DSP

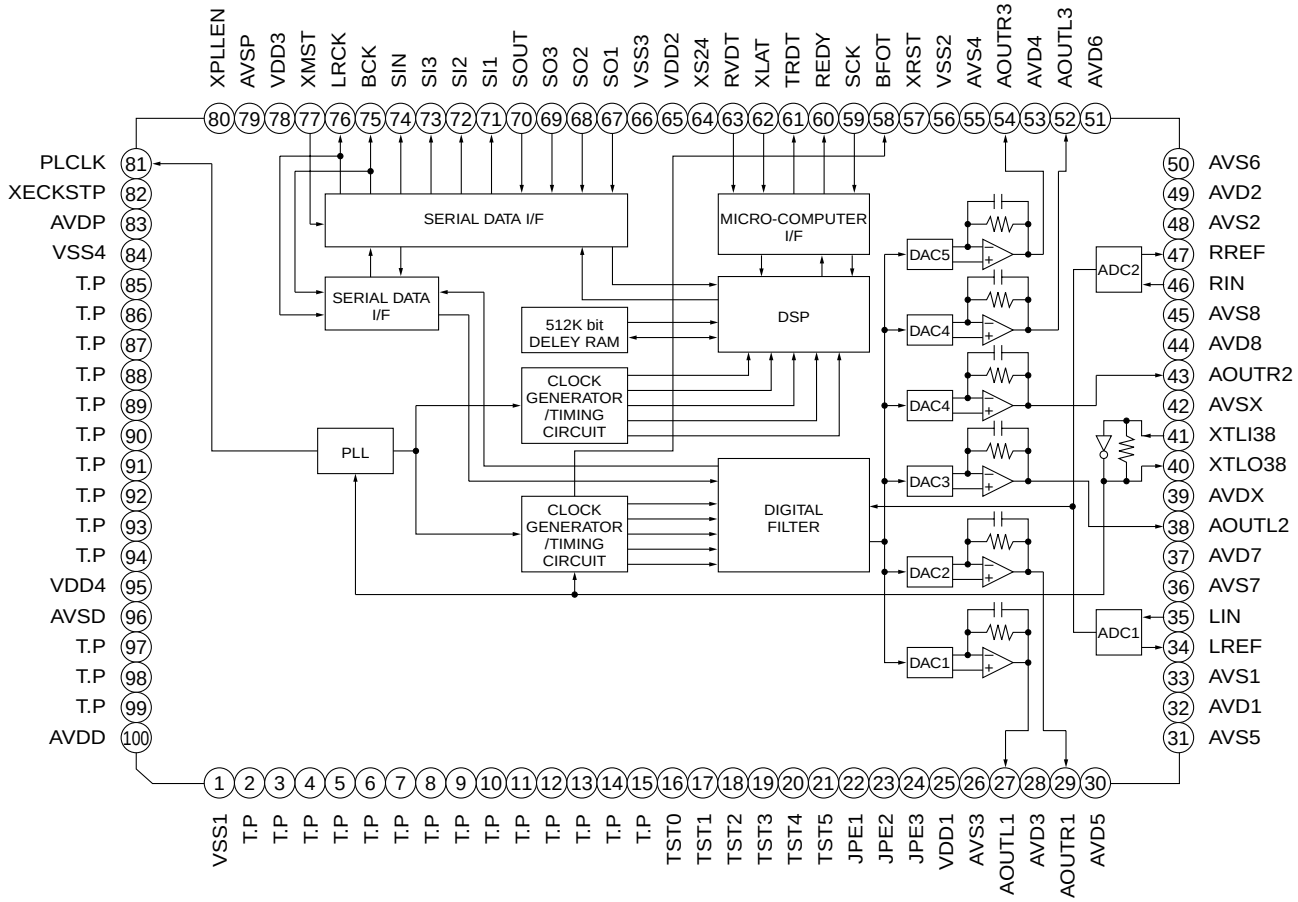
Pin No.	Pin Name	I/O	Format	Function and Operation
64	DSPLAT	O	C	SONY DSP: latch output
65	DSPRDY	I	C	SONY DSP: IF ready/busy
66	EMPHIN	I	C	Input of information on emphasis
67-73	NC			Not used
74	NOISE	I		Input of noises for ASL
75				GND for the analog system
76	NC			Not used
77		I		Input of reference voltage for AD
78				Power supply to the analog system
79-80	NC			Not used

* PD5704A

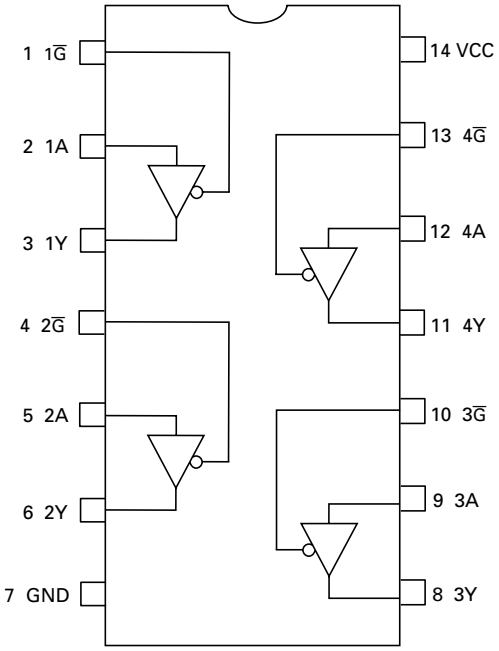


Format	Meaning
C	C MOS

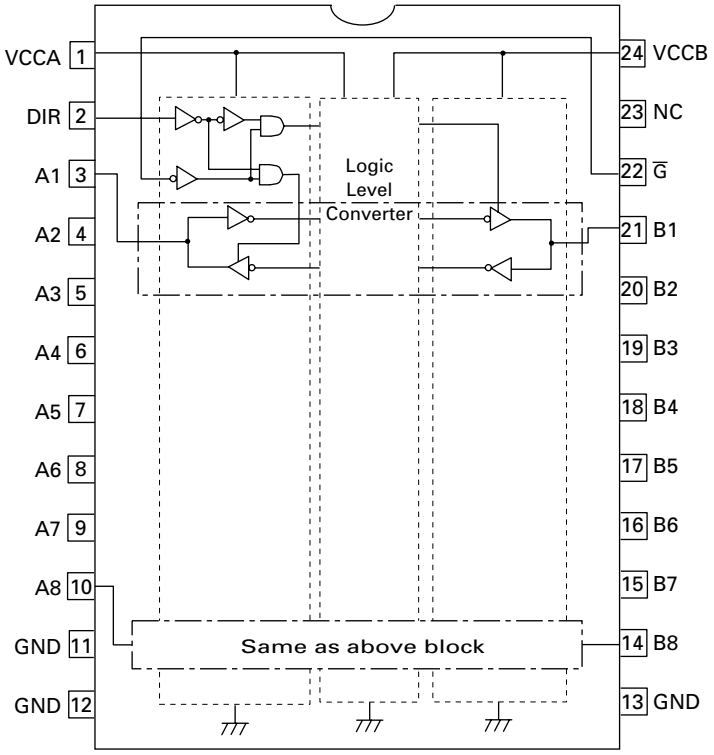
* PDG262A



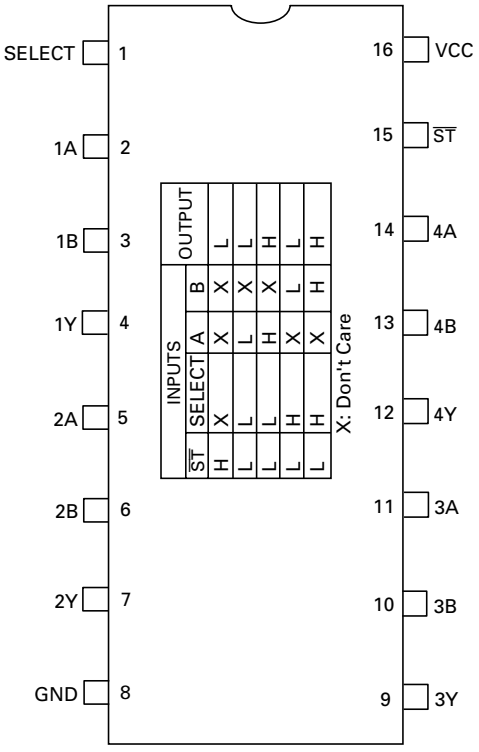
* TC74VHCT125AFT



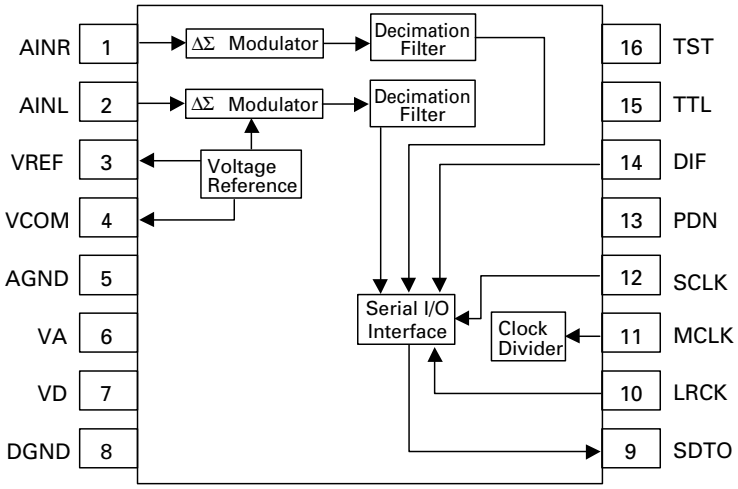
* TC74LVXC3245FS



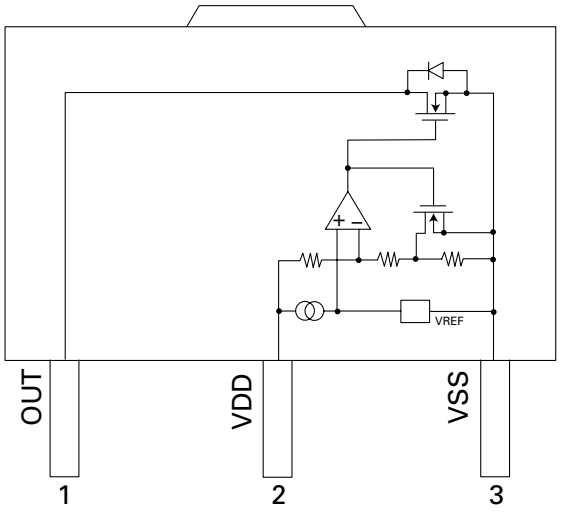
* TC74VHC157FT



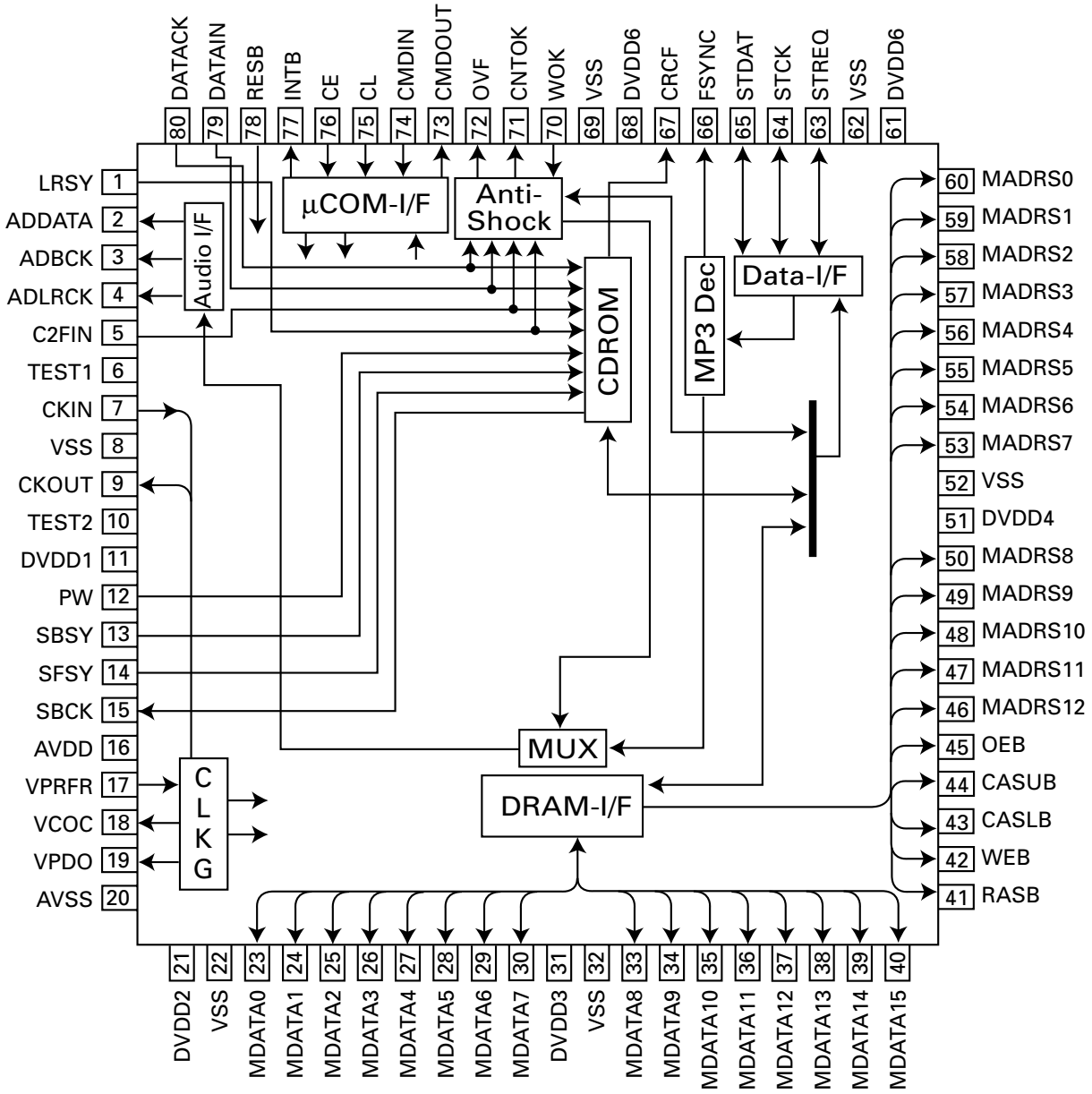
* AK5353VT



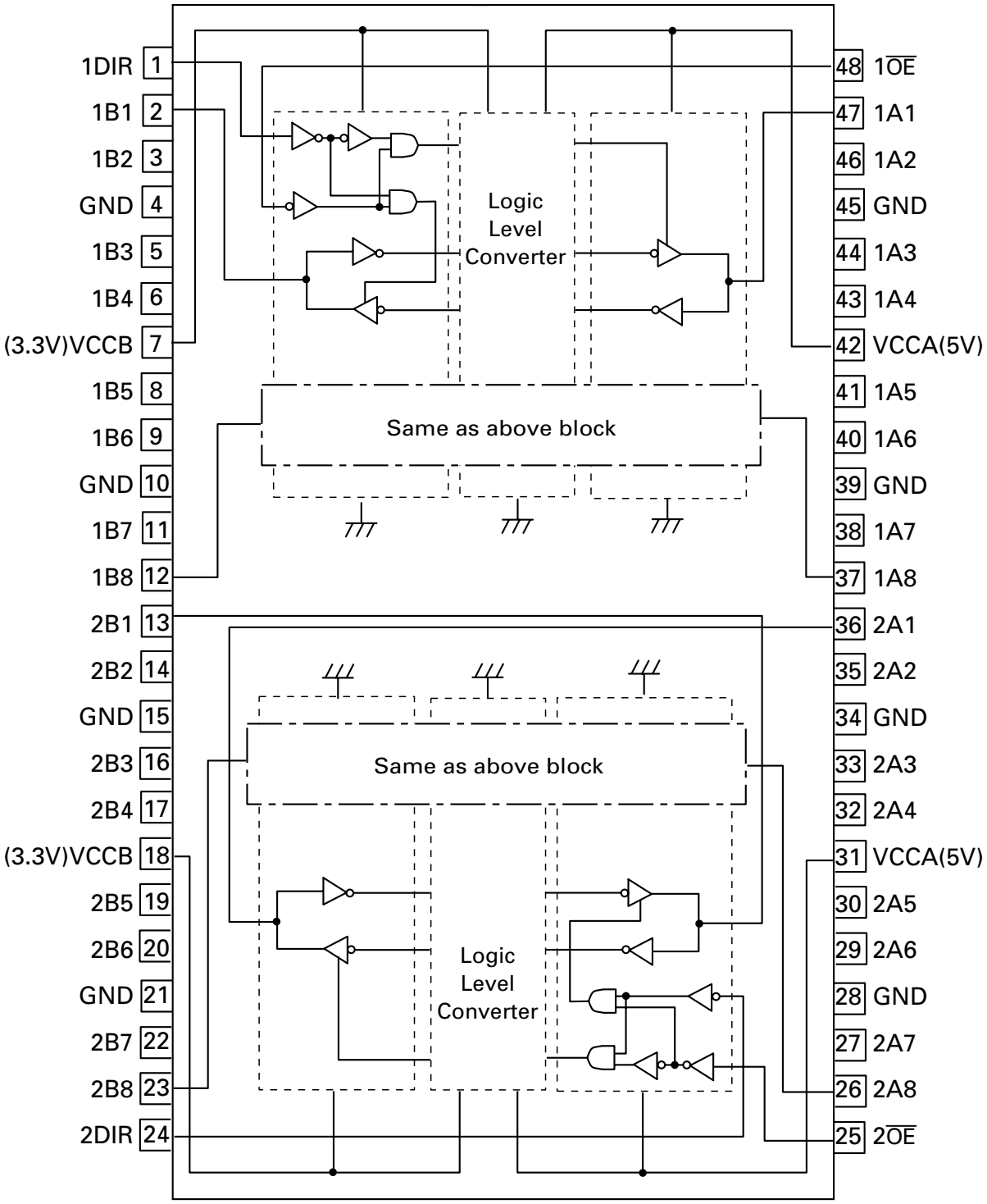
* S-80818ANUP-EDF



* LC78683ES



* TC74LCXR163245FT

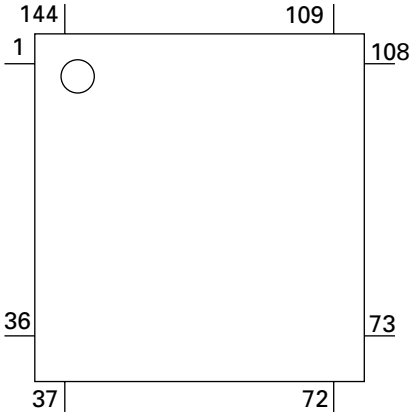


● **Pin Functions(PE5218C)**

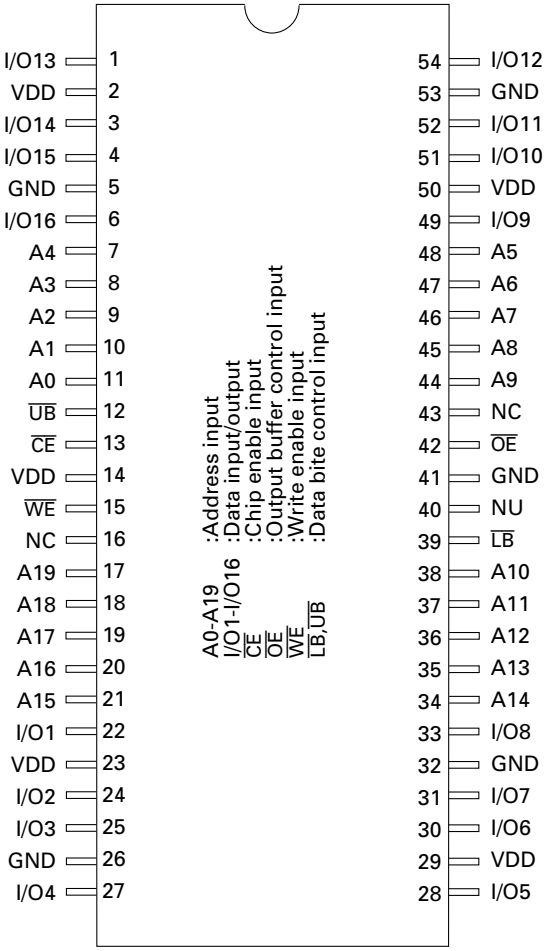
Pin No.	Pin Name	I/O	Function and Operation
1-7	D14-8	I/O	Input/output of data bus (bit15 - bit0)
8	VDD		VDD
9	VSS		VSS
10-17	D7-0	I/O	Input/output of data bus (bit15 - bit0)
18	VPP		VPP
19	ATADMARQ	I	ATA: input of DMA request signals
20	RECON	O	Output of controls of switching (record,input/play,out)
21	DEMPH	O	Output of de-emphasis for digital DSP
22	ATRAC3ON	O	Output of controls of switching (ATRAC3/CD-DA&CD-ROM(MP3))
23	PCL	O	Output of pulses for adjusting the clock
24	FSYNC		LC78683E: MP3 frame synchronization signals
25	CRCF	I	Signals to determine Reset of CD mechanism (DSPMUTE)
26	MSARI	I	Input of detection of MS half (detection of reverse insertion)
27	VDD		VDD
28	VSS		VSS
29	ATADMAK	O	ATA: output of DMA acknowledgement signals
30	FWRIN	I	Input of settings of writing mode for self-rewriting of Flash EP-ROM
31	LVL_CH	I	Input of monitoring level of analog input for HDD recordings
32	BDIR1	O	H2CDS: output of direction switching of P-BUS5/3.3V converter IC
33	BDIR0	O	System: output of direction switching of P-BUS5/3.3V converter IC
34	DASP	I	ATA: input of device active signals
35	IORDY	I	ATA: input of IO ready (not used while DMA transfer)
36	BENBL	O	System&H2CDS: output of P-BUS5/3.3V converter IC enable
37	VDD		VDD
38	VSS		VSS
39	BSRQ1	I	H2CDS: input of request for P-BUS serial polling
40	XIRQ	I	CXD1859: input of interrupt request signals
41	MSINT	O/I	CXD1859: input of detection of insertion/extraction
42	ATAINTRQ	I	ATA: input of interrupt request
43	BRST1	O	H2CDS: output of P-BUS reset
44	BRXEN1	I/O	H2CDS: input/output of P-BUS busy
45	BRXEN0	I/O	System: input/output of P-BUS busy
46	TESTIN	I	Input of test mode
47	VDD		VDD
48	VSS		VSS
49	BSRQ0	O	System: output of request for P-BUS serial polling
50	BSENS	I	Input of sensing backup power supply
51	BRST0	I	System: input of P-BUS reset
52	KYDT	I	FL display: input of reception of UART
53	DPDT	O	DSP: output of switching between analog/digital of IC
54	CDCMDCK	O	LC78683E: output of clock
55	CDCMDI	I	LC78683E: input of data
56	CDCMDO	O	LC78683E: output of data
57	MODE1	I	
58	MODE0	I	
59	RESET	I	Reset
60	CKSEL	I	
61	CVDD		CVDD
62	X2		
63	X1	I	
64	CVSS		CVSS
65	BSCK1	I/O	H2CDS: input/output of P-BUS clock
66	BSI1	I	H2CDS: input of P-BUS data
67	BSO1	O	H2CDS: output of P-BUS data
68	BSK0	I/O	System: input/output of P-BUS clock

Pin No.	Pin Name	I/O	Function and Operation
69	BSI0	I	System: input of P-BUS data
70	BSO0	O	System: output of P-BUS data
71	AVDD		AVDD
72	AVSS		AVSS
73	TEMP	I	Input of temperature sensing
74	ATAVSENS	I	Input of sensing VD power supply voltage in the ATA section
75	KD5	I	Input of status of DSP initialization
76-80	KD4-0	I	Input from analog keys 5 - 0 → 4 - 0
81	VDD		VDD
82	VSS		VSS
83	MUTE	O	Output of final muting of the analog system
84	CDINTB	I	LC78683E: input of interrupt request signals
85	ATARST	O	ATA: output of device reset signals
86	CDRSTB	O	LC78683E: output of reset
87	CDPW	O	Output of controls of power supply to CD-ROM/MP3 section
88	CDCE	O	LC78683E: output of chip enable
89	ATAPW	O	Output of controls of power supply to the ATA section
90	BMUTE	O	Output of muting for the digital DSP
91	WAIT	O	H2: output sampling rate of signals output from CD mechanism to the DSP microcomputer
92	BCYST	O	H2: output sampling rate of signals output from CD mechanism to the DSP microcomputer
93	CTS	I	FL display: input of CTS
94	RTS	O	Output of operation-demanding triggers to the DSP microcomputer/DAC
95	RD	O	Output of read strobe signals
96	UWR	O	Output of write-enable signals for upper bytes
97	LWR	O	Output of write-enable signals for lower bytes
98	VDD		VDD
99	VSS		VSS
100	MSLOCKIN	I	Input of detection of MS half lock (fully inserted)
101	MODELIN0	I	Input of settings of models
102	IORD	O	ATA: read strobe for DMA flyby transfer
103	CS4(ATA)	O	Chip selection (ATA section)
104	CS3(CXD1859)	O	Chip selection (CXD859 section)
105	IOWR	O	ATA: write strobe for DMA flyby transfer
106	DALMON	O	Output of settings of power saving
107	CS0(SRAM)	O	SRAM chip selection
108	UBE	O	Output of enable signals for upper bytes
109	LBE	O	Output of enable signals for lower bytes
110	FLWRCNT	O	Output of controls of power supply for Flash EP-ROM self-rewriting
111	XPW	O	Output of controls of power supply to CXD1859 section
112	VDD		VDD
113	VSS		VSS
114-115	A25-24	O	Output of address bus (bit18 - bit0)
116	ADCRST	O	Output of controls of resetting the external A/D
117	XLED	O	MS access indicator
118	XRST	O	CXD1859: output of reset
119-123	A20-16	O	Output of address bus (bit18 - bit0)
124	VDD		VDD
125	VSS		VSS
126-133	A15-8	O	Output of address bus (bit18 - bit0)
134	VDD		VDD
135	VSS		VSS
136-142	A7-1	O	Output of address bus (bit18 - bit0)
143	SUBOK	I	H2: input from SUBOK pin of CD mechanism's P-BUS
144	D15	I/O	Input /output of data bus (bit15 - bit0)

* PE5218C



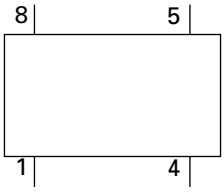
* TC55V16100FTI-15



● **Pin Functions(CXK2000EN)**

Pin No.	Pin Name	I/O	Function and Operation
1	$\overline{CS}$	I	Chip selection
2	$\overline{SK}$	I	Input of serial clock
3	DI	I	Input of serial data
4	DO	O	Output of serial data
5	GND		Ground
6	RESET	I	Input of reset
7	RDY/$\overline{BSY}$	O	Output of READY/BUSY
8	VCC		Power supply

* CXK2000EN

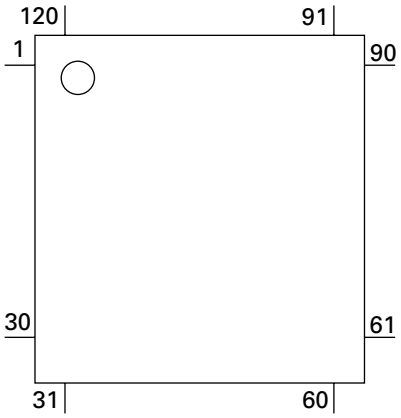


● **Pin Functions(CXD1859AR)**

Pin No.	Pin Name	I/O	Function and Operation
1	CLKSEL2	I	Selection of clock mode
2	XTAL0	O	22.5792MHz oscillating cell (includes feedback resistors)
3	EXTAL0	I	22.5792MHz oscillating cell (includes feedback resistors)
4	VSS0		Ground
5, 6	CLKSEL3, 4	I	Selection of clock mode
7	VDD0		Power supply to the core (1.8V)
8	VDE0		Power supply to IO (3.3V)
9	XTAL1	O	8/12/16/20MHz oscillating cell (includes feedback resistors)
10	EXTAL1	I	8/12/16/20MHz oscillating cell (includes feedback resistors)
11	OSCSTP	O	Output of stopping oscillation
12	VSS1		Ground
13	RST	I	Input of reset
14	AVS1		Ground for the analog system (PLL)
15	AVD1		Power supply to the analog system (PLL)
16	FS256O	O	Output of 256fs clock
17, 18	DP0, 1	I/O	DSP port 0, 1
19	VSS2		Ground
20	BS	O	Memory Stick bus state
21	SCLK	O	Memory Stick clock
22	DIO	I/O	Memory Stick data
23	VDE1		Power supply to IO (3.3V)
24	VDD1		Power supply to the core (1.8V)
25	DP2	I/O	DSP port 2
26	INS	I	Detection of insertion/extraction of Memory Stick
27	VSS3		Ground
28	UDP	I/O	data +
29	AVD2		Power supply to the analog system (USB)
30	UDM	I/O	data -
31	BCLK	I/O	Bit clock
32	LRCK	I/O	LR clock
33	SDO	O	Audio data out
34	VSS4		Ground
35	SDI	I	Audio data in
36	DAOUT	O	Digital audio out
37	DAIN	I	Digital audio in
38	VDE2		Power supply to IO (3.3V)
39-44	DB0-5	I/O	16 bit data bus
45	VDD2		Power supply to the core (1.8V)
46	VSS5		Ground
47-52	DB6-DB11	I/O	16 bit data bus
53	VDE3		Power supply to IO (3.3V)
54-56	DB12-14	I/O	16 bit data bus
57	VSS6		Ground
58	DB15	I/O	16 bit data bus
59-63	ADR0-4	I	Address bus
64	VSS7		Ground
65, 66	ADR5, 6	I	Address bus
67	VDD3		Power supply to the core (1.8V)
68	VDE4		Power supply to IO (3.3V)
69-71	ADR7-9	I	Address bus
72	VSS8		Ground
73-77	ADR10-14	I	Address bus
78	RD	I	Read enable
79	VSS9		Ground
80	WRU	I	UPPER BYTE write enable

Pin No.	Pin Name	I/O	Function and Operation
81	WRL	I	LOWER BYTE write enable
82	CS	I	Chip selection
83	VDE5		Power supply to IO (3.3V)
84	VDD4		Power supply to the core (1.8V)
85	IRQ	O	Interrupt request
86	DREQ	O	USB: DMA request
87	VSS10		Ground
88	DACK	I	USB: DMA acknowledgement
89	TEST0	O	OPEN
90	TEST1	I	OPEN or input "H"
91	SIOSI	I	Serial data in
92	SIOSO	O	Serial data out
93	SIOCS	O	Chip selection
94	VSS11		Ground
95	SIOCK	O	Serial clock
96	ACLK		ATRAC3 data clock
97	ARQ		ATRAC3 data request
98	VDE6		Power supply to IO (3.3V)
99	ABS		ATRAC3 data strobe
100	ACDO		ATRAC3 data out
101	ACDI		ATRAC3 data in
102	DP3	I/O	DSP port 3
103	TKURST	I	Input "L"
104	TKDBG	I	Input "L"
105	VDD5		Power supply to the core (1.8V)
106	VSS12		Ground
107	TKTCK	I	OPEN or input "L"
108	TKTDI	I	OPEN or input "L"
109	TKTMS	I	OPEN or input "L"
110	TKTDO	O	OPEN
111	TKTINT	O	OPEN
112	MD0	I	Mode setting
113	VDE7		Power supply to IO (3.3V)
114, 115	MD1, 2	I	Mode setting
116	TRST	I	Input "L"
117	VSS13		Ground
118	CLKOUT	O	Output of system clock
119, 120	CLKSEL0, 1	I	Selection of clock mode

* CXD1859AR

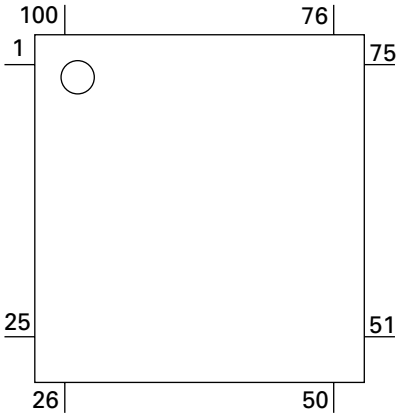


● **Pin Functions(PD5646A)**

Pin No.	Pin Name	I/O	Function and Operation
1	TUNPDO	O	Output of PLL data
2	TUNPCK	O	Output of PLL clock
3	TUNPCE	O	Output of TUNER ENABLE
4	TUNPCE2	O	Output of TUNER ENABLE 2
5-7	NC		Not used
8	BYTE	I	GND: input for switching between external data bus widths
9	CNVss	I	GND: input for switching between processor modes
10	MICSENS	I	Microphone sensing
11	TELIN	I	Input of cellular telephone
12	RESET	I	Input of reset
13	Xout	O	Output of oscillation (10MHz)
14	Vss	I	GND
15	Xin	I	Input of oscillation (10MHz)
16	Vcc	I	Power supply (5V)
17-19	NC		Not used
20	BSENS		Backup sensing
21	RX2	I	IPBUS: input 2
22	IPPW	O	IPBUS: output of controls of power supply to the driver
23	ISENS	I	ILM SENS
24	PEE	O	PEE OUT
25	NC		Not used
26	ASNSBO	O	IPBUS: output of ACC
27	MUTE	O	General muting
28	NC		Not used
29	RX	I	IPBUS: input of data
30	TX	O	IPBUS: output of data
31	BSO	O	PBUS: output of data
32	BSI	I	PBUS: input of data
33	BSCK		PBUS: clock
34	SWVDD	O	GRILL: output of controls of power supply to the microcomputer
35	DPDT	O	GRILL: output of data to be displayed
36	KYDT	I	GRILL: input of key data
37	SYSPW	O	System power
38	LOCL	O	TUNER: output of local L
39	PCL		For adjusting clock
40	LOCH	O	TUNER: output of local H
41	AM_FM	O	TUNER: output of controls of power supply to the decoder
42	ST	I	TUNER: input of stereo indicator
43	SD	I	TUNER: input of SD
44	DALMON	O	For circuits reducing dark current
45-55	NC		Not used
56	ILMPW	O	Output of power to illumination
57	FLPILM	O	Output of illumination in the flap
58-64	NC		Not used
65	ROMCK	O	ROM correction: output of clock
66	ROMDATA	O/I	ROM correction: data
67	BSRQ2	O/I	PBUS: request for communication (for DSP)
68	ROMCS	O	ROM correction: output for chip selection
69	BRXEN	I/O	PBUS: communication input/output
70	BRST	O	PBUS: reset
71	BSRQ	I	PBUS: input of communication request
72	DSENS	I	Detachment sensing
73	NC		Not used
74	ASENS		ACC sensing
75-81	NC		Not used

Pin No.	Pin Name	I/O	Function and Operation
82	CSENS	I	FLAP: input of detection of FLAP open/close
83	RECMUTE	O	Muting of audio recording on the HDD
84-88	NC		Not used
89	TESTIN	I	Input of test program
90	NC		Not used
91	OELPW	O	Output of power supply to the organic EL
92	NC		Not used
93	MODEL	I	Model sensing
94-95	NC		Not used
96	NC	I	Input of power supply to AD conversion
97	SL		TUNER: signals level
98	NC	I	Input of reference power supply to AD conversion
99	NC	I	Input of power supply to AD conversion
100	TUNPDI	I	PLL: input of data

* PD5646A

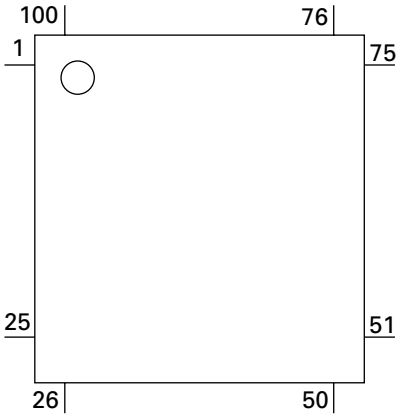


● Pin Functions(PD5647A)

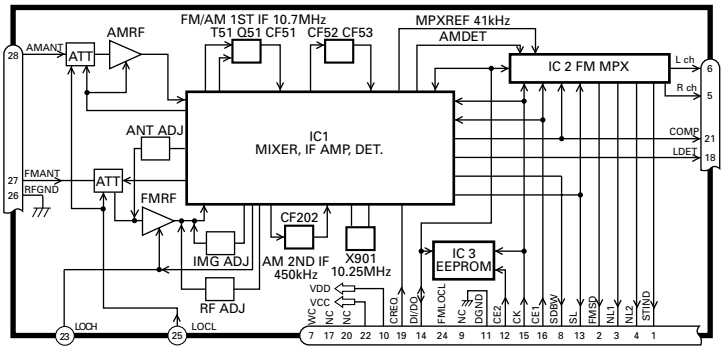
Pin No.	Pin Name	I/O	Function and Operation
1	TUNPDO	O	PLL: output of data
2	TUNPCK	O	PLL: output of clock
3	TUNPCE	O	TUNER: output of ENABLE
4	TUNPCE2	O	TUNER: output of ENABLE 2
5-7	NC		Not used
8	BYTE	I	GND: input for switching between the external data bus widths
9	CNVss	I	GND: input for switching between processor modes
10	MICSENS	I	Microphone sensing
11	TELIN	I	Input of cellular telephone
12	RESET	I	Input of reset
13	Xout	O	Output of oscillation (10MHz)
14	Vss	I	GND
15	Xin	I	Input of oscillation (10MHz)
16	Vcc	I	Power supply (5V)
17	NC		Not used
18	RCK		RDS: CLOCK
19	LDET	O/I	RDS: input of detection of PLL lock
20	BSENS		Backup sensing
21	RX2	I	IPBUS: input 2
22	IPPW	O	IPBUS: output of controls of power supply to the driver
23	ISENS	I	ILM SENS
24	PEE	O	PEE OUT
25	RDS57K	I	RDS: input of 57KHz pulse count
26	ASNSBO	O	IPBUS: output of ACC
27	MUTE	O	General muting
28	TMUTE	O	RDS,TUNER: muting TUNER
29	RX	I	IPBUS: input of data
30	TX	O	IPBUS: output of data
31	BSO	O	PBUS: output of data
32	BSI	I	PBUS: input of data
33	BSCK		PBUS: clock
34	SWVDD	O	GRILL: output of controls of power supply to the microcomputer
35	DPDT	O	GRILL: output of data to be displayed
36	KYDT	I	GRILL: input of key data
37	SYSPW	O	System power
38	LOCL	O	TUNER: output of local L
39	PCL		For adjusting clock
40	LOCH	O	TUNER: output of local H
41	AM_FM	O	TUNER: output of controls of power supply to the decoder
42	ST	I	TUNER: input of stereo indicator
43	SD	I	TUNER: input of SD
44	DALMON	O	For circuits reducing dark current
45	CURRQ	O	RDS: current request
46	SDBW	I	RDS: input of SD while NF
47	RECIVE	O	RDS: output of "receiving"
48	DRST	O	RDS: output of reset
49	RDSLK	I	RDS: input of LK
50	RDT	I	RDS: input of data
51-55	NC		Not used
56	ILMPW	O	Output of power to illumination
57	FLPILM	O	Output of illumination in the flap
58-64	NC		Not used
65	ROMCK	O	ROM correction: output of clock
66	ROMDATA	O/I	ROM correction: data
67	BSRQ2	O/I	PBUS: request for communication (for DSP)

Pin No.	Pin Name	I/O	Function and Operation
68	ROMCS	O	ROM correction: output for chip selection
69	BRXEN	I/O	PBUS: input/output of communication
70	BRST	O	PBUS: reset
71	BSRQ	I	PBUS: input of request for communication
72	DSENS	I	Detachment sensing
73	NC		Not used
74	ASENS		ACC sensing
75-81	NC		Not used
82	CSENS	I	FLAP: input of detection of FLAP open/close
83	RECMUTE	O	Muting of audio recording on the HDD
84-88	NC		Not used
89	TESTIN	I	Input of test program
90	NC		Not used
91	OELPW	O	Output of power supply to the organic EL
92-93	NC		Not used
94	NL2DT	I	RDS: signals of NL2 existing
95	NL1		RDS: noises level
96		I	Input of power supply to AD conversion
97	SL		TUNER: signals level
98		I	Input of reference power supply to AD conversion
99		I	Input of power supply to AD conversion
100	TUNPDI	I	PLL: input of data

* PD5647A

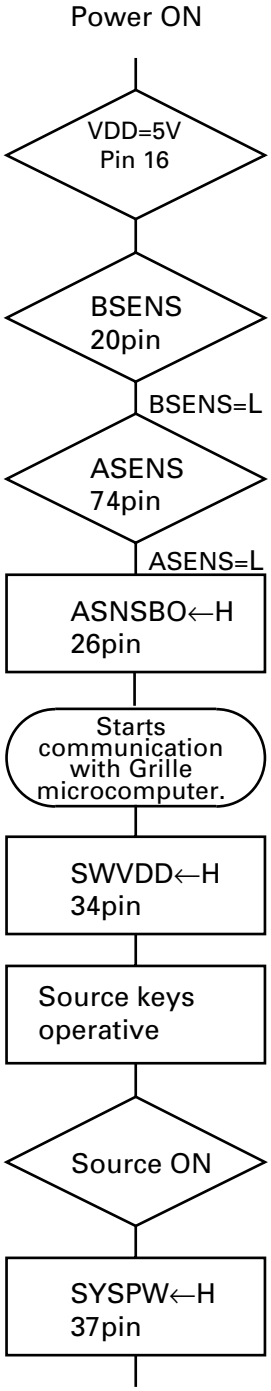


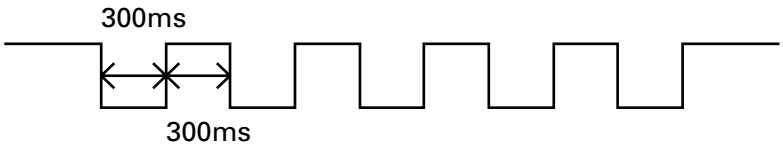
● FM/AM Tuner Unit



No.	Symbol	I/O	Explain	
1	STIND	O	stereo indicator	"Low" when the FM stereo signals are received. To be pulled up to the "VDD" at 47kΩ.
2	FMSD	O	FM station detector	"High" when signals are received. To be pulled up to the "VDD" at 47kΩ Meanwhile, 10kΩ should be used when taking diver FIX trigger from here and "High: 0.9VDD or more" and "Low: 250mV or less". (Should satisfy the diver IC specifications)
3	NL1	O	noise level-1	"High" when noise is received. Output for the RDS. GND at 47kΩ //1,800pF.
4	NL2	O	noise level-2	"High" when noise is received. Output for the RDS. GND at 36kΩ //330pF.
5	Rch	O	R channel output	FM stereo "R-ch" signal output or AM audio output. Add the specified de-emphasis constant.
6	Lch	O	L channel output	FM stereo "L-ch" signal output or AM audio output. Add the specified de-emphasis constant.
7	WC		write control	EEPROM write control. Writing permissible at "Low". Normally open.
8	SDBW	O	SD bandwidth	SD bandwidth signal output. For detection of detuning data for the RDS.
9	NC			Not used
10	VDD		power supply	Power supply pin for the digital section. DC 5V +/- 0.25V. Be careful about overlapping noise in the logic section.
11	DGND		digital ground	Grounding for the digital section.
12	CE2	I	chip enable-2	EEPROM chip enable. Active a "Low" To be pulled up to the "VDD" at 47kΩ
13	SL	I/O	signal level	Received FM/AM signal level (strength) output. Connect the specified load resistor and capacitor (10k Ω + 39k Ω //4,700pF)
14	DI/DO	I/O	data input/ data output	Data input/Data output To be pulled up to the "VDD" at 47kΩ
15	CK	I	clock	Clock input To be pulled up to the "VDD" at 47kΩ
16	CE1	I	chip enable-1	AF·RF chip enable. Active at "High" To be grounded at 47kΩ
17	NC			Not used
18	LDET	O	lock detector	Active at "Low". To be pulled up to the "VDD" at 47kΩ
19	CREQ	I	current request	Active at "Low". To be grounded at 47kΩ
20	NC			Not used
21	COMP	O	composite signal	FM composite signal output. r out < 100Ω
22	VCC		power supply	Analog section power supply pin.DC 8.4V +/- 0.3V
23	LOCH	I	local high	FM local high pin. When seeking local high, apply 5V together with "LOCL".
24	FMLOCL	I	FM local low	FM local low pin. When seeking local low, apply 5V to the base of the NPN transistor with which the specified resistor is being connected to the emitter. Keep it open in case of ordinary marketed models.
25	LOCL	I	local low	FM/AM local low pin. When seeking local low, apply 5V to the base of the NPN transistor. Since this pin is exclusive for AM when the FMLOCL is in use, do not drive it under FM.
26	RFGND		RF ground	Grounding for the antenna section.
27	FMANT	I	FM antenna input	FM antenna input. 75Ω. Surge absorber (DSP-201M-S00B) is necessary.
28	AMANT	I	AM antenna input	AM antenna input. High impedance. Connect to the antenna through an L (LAU type) of 4.7µH.To cope with the power transmission line hums, insert a series circuit consisting of an L (a coil of about 100mH) + R (a resistor of 470 Ω to 2.2kΩ) between the GND.

7.3 OPERATIONAL FLOW CHART





In case of the above signal, the communication with Grille microcomputer may fail.
If the time interval is not 300msec, the oscillator may be defective.

Completes power-on operation.
(After that, proceed to each source operation)

7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

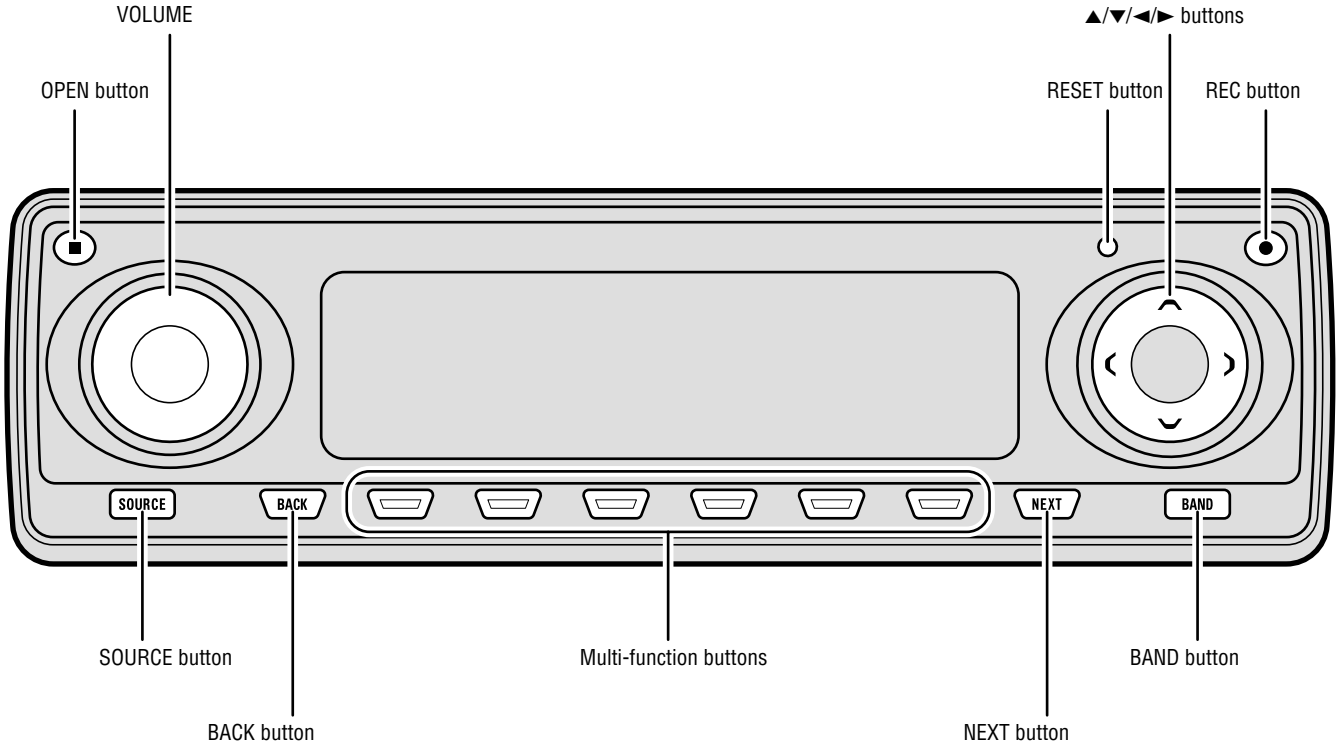
Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Portions to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. OPERATIONS AND SPECIFICATIONS

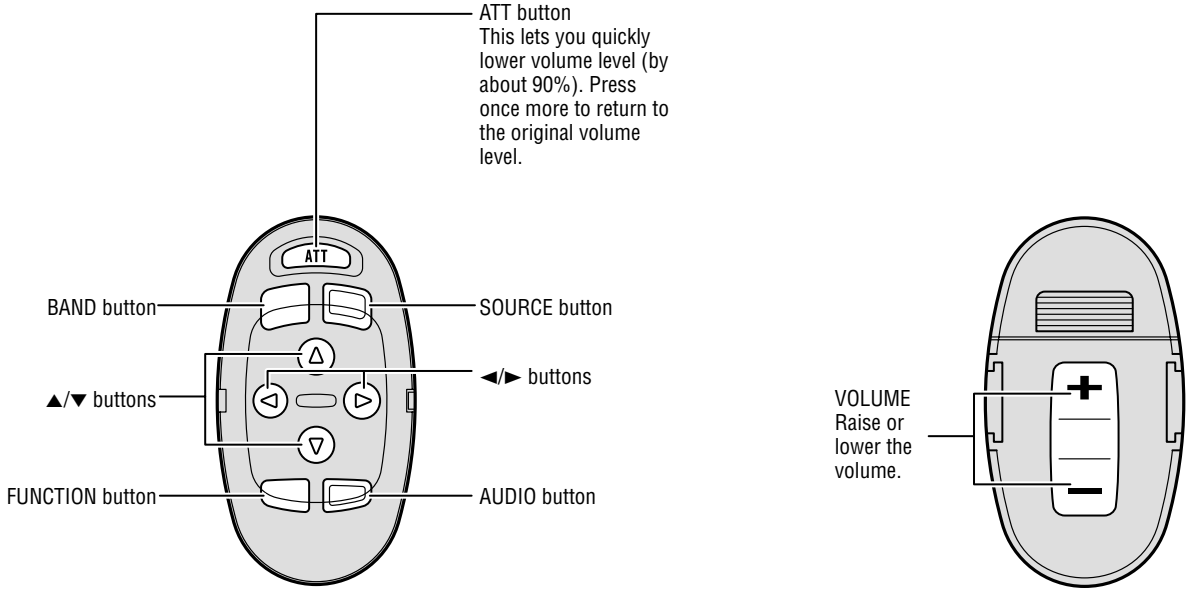
8.1 OPERATIONS

Head unit



Steering remote controller

A steering remote controller that enables remote operation of the head unit is supplied. Operation is the same as when using buttons on the head unit.



Turning a source on or off

You can select the source you want to listen to. To switch to built-in CD player, load a CD in this product. To switch to a "Memory Stick" player, load a "Memory Stick" in this product.

1. **Press SOURCE to select the desired source (e.g., tuner).**

   Press SOURCE repeatedly to switch between the following sources:
   Built-in CD player (MP3) → TV tuner → Tuner → DAB tuner → Music server → "Memory Stick" player → Multi-CD player → External unit 1 → External unit 2 → AUX

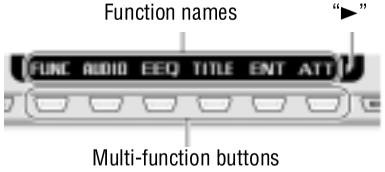
2. **Press VOLUME to extend the VOLUME outward.**
   - When you press VOLUME, it extends outward so that it becomes easier to turn. To retract VOLUME, press it again.
3. **Turn VOLUME to adjust the volume.**

4. **Press and hold SOURCE to turn the source off.**

Note:
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this product. Two external units can be controlled by this product, although "External" is displayed whether you select external unit 1 or external unit 2. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this product.
- In the following cases, the sound source will not change:
  * When no product corresponding to the source is connected to this product.
  * No disc is set in this product.
  * No "Memory Stick" is set in this product.
  * No magazine is set in the multi-CD player.
  * AUX (auxiliary setting) is set to off.
- When this product's blue/white lead is connected to the car's auto-antenna relay control terminal, the car's auto-antenna extends when this product's source is switched on. To retract the antenna, switch the source off.

SOFT KEY operation

SOFT KEY operation means that the function of a button changes as indicated on the display. The multi-function buttons provide SOFT KEY operation; the functions performed by the buttons change according to the function or setting that has been selected.



The explanations given in this manual are based on FORM 1 display. If you have selected FORM 2, the functions of some of the multi-function buttons may be different from those indicated in the manual.

Important

In this manual, for operations using the multi-function buttons the function displayed is used as the name of the function button.

Switching the function of the multi-function buttons

The "►" indicator shows that the multi-function buttons have functions other than those currently displayed. When this indicator is visible, press NEXT to switch through the functions of the multi-function buttons.

- **Press NEXT to display the desired functions (e.g., built-in CD player).**

  Press NEXT repeatedly to switch between the following functions:

Note:
- The number of functions or displays switched through will differ according to the source or menu selected.
- When no function is indicated for a button, that button is not currently active.

Example of multi-function button operation

Here the "random play" function of the built-in CD player is used as an example to illustrate operation of the multi-function buttons.

1. **Press NEXT to display "FUNC".**

   Press NEXT repeatedly until "FUNC" appears.

2. **Press FUNC to enter the function menu.**

   With the switch to the function menu, the functions of the multi-function buttons also change simultaneously.

3. **Press RDM to select the random mode.**

4. **Press RDM to turn random play on.**

The light illuminates.

- Press RDM again to turn random play off. The light goes off.

5. **Press BACK to exit the function menu.**

   When the function menu is exited, the functions of the multi-function buttons also change simultaneously.

Note:
- You can also turn random play on or off by pressing ▲ or ▼ in the random mode.
- If you do not operate the function within about 30 seconds, the display is automatically returned.

The difference between the BAND button and the BACK button

BAND button

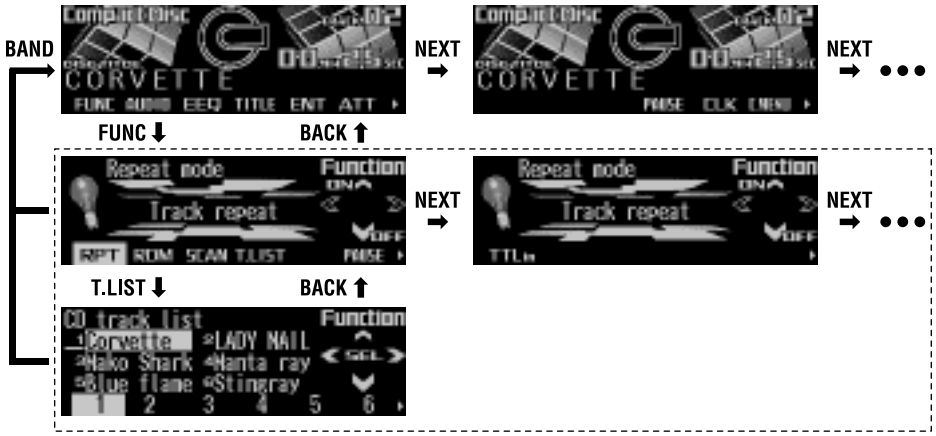
Pressing the BAND button immediately cancels the current menu or mode, and returns to the basic displays.

Note:
- When the source is the Tuner, TV tuner or DAB tuner and no menu or mode is selected, pressing the BAND button has the effect of switching bands.

BACK button

Pressing the BACK button cancels the current menu or mode and returns to the previously selected menu or mode.

Display example (e.g., built-in CD player)



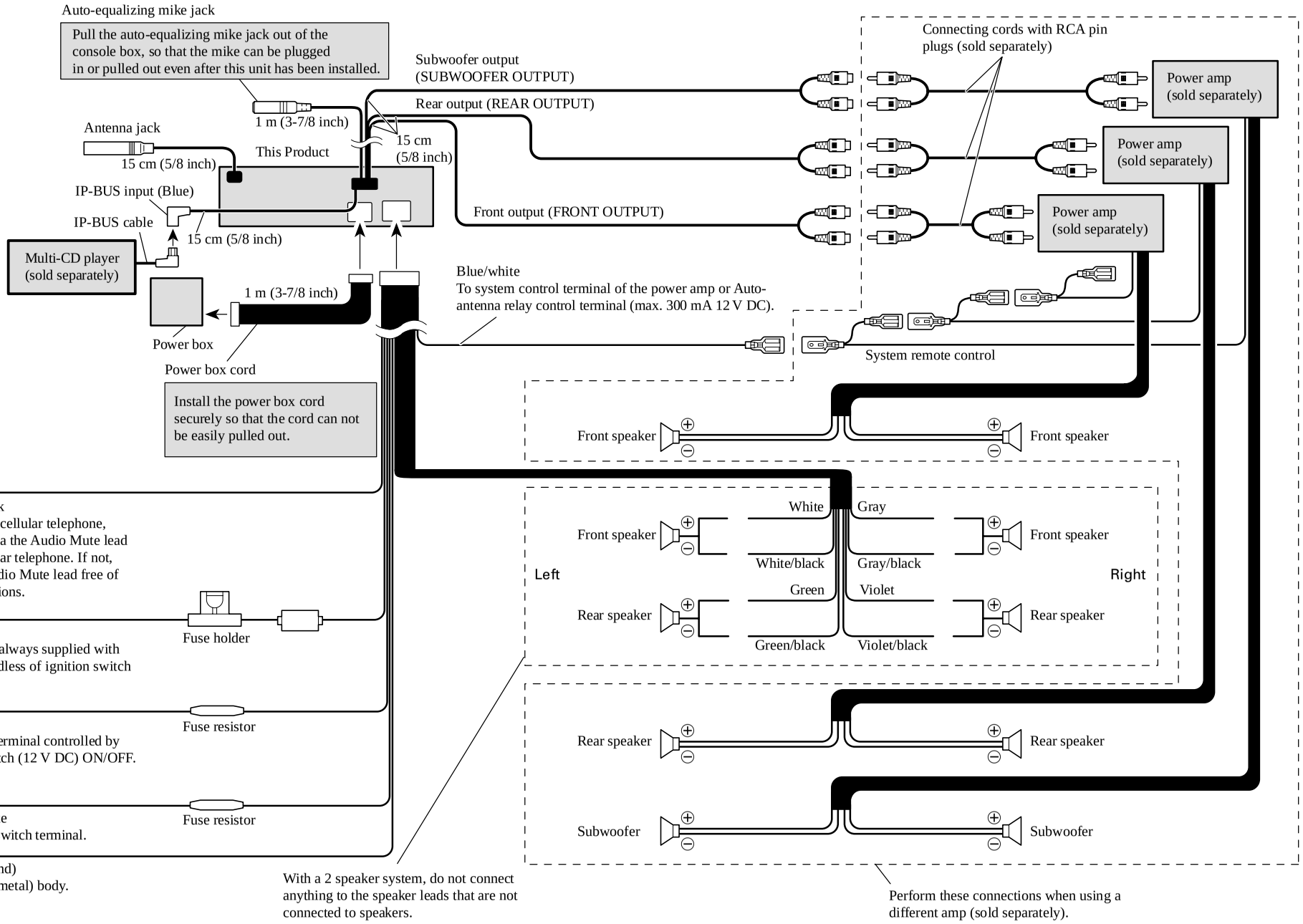
Key guidance indicator

This product's display features key guidance indicators. These light to indicate which of the ▲/▼/◄/► buttons you can use. When you're in the function menu, audio menu or the other menus, they also make it easy to see which ▲/▼/◄/► buttons you can use to switch functions on/off, switch repeat selections and perform other operations.

Key guidance indicators

Note:

- In this manual, operation for each mode is given mainly in terms of the multi-function buttons. However, in each mode, when the key guidance indicators are lit it is also possible to use ▲/▼/◄/► to operate the mode.


Auto-equalizing mike jack
Pull the auto-equalizing mike jack out of the console box, so that the mike can be plugged in or pulled out even after this unit has been installed.
1 m (3-7/8 inch)
Antenna jack
15 cm (5/8 inch)
This Product
15 cm (5/8 inch)
IP-BUS input (Blue)
IP-BUS cable
15 cm (5/8 inch)
Multi-CD player (sold separately)
1 m (3-7/8 inch)
Power box
Power box cord
Install the power box cord securely so that the cord can not be easily pulled out.
Subwoofer output (SUBWOOFER OUTPUT)
Rear output (REAR OUTPUT)
Front output (FRONT OUTPUT)
Connecting cords with RCA pin plugs (sold separately)
Power amp (sold separately)
Power amp (sold separately)
Power amp (sold separately)
Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal (max. 300 mA 12 V DC).
System remote control
Front speaker
Front speaker
White
Gray
Front speaker
Front speaker
White/black
Gray/black
Left
Right
Green
Violet
Rear speaker
Rear speaker
Green/black
Violet/black
Rear speaker
Rear speaker
Subwoofer
Subwoofer
Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.
Yellow
To terminal always supplied with power regardless of ignition switch position.
Fuse holder
Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Fuse resistor
Orange/white
To lighting switch terminal.
Fuse resistor
Black (ground)
To vehicle (metal) body.
With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.
Perform these connections when using a different amp (sold separately).

● **DEH-P90HDD/UC**

Specifications

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Backup current ..... Less than 8 mA
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Dimensions
(DIN) (chassis) ..... 178 (W) × 50 (H) × 155 (D) mm
[7 (W) × 2 (H) × 6-1/8 (D) in.]
(nose) ..... 188 (W) × 58 (H) × 37 (D) mm
[7-3/8 (W) × 2-1/4 (H) × 1-1/2 (D) in.]
(D) (chassis) ..... 178 (W) × 50 (H) × 160 (D) mm
[7 (W) × 2 (H) × 6-1/4 (D) in.]
(nose) ..... 170 (W) × 46 (H) × 32 (D) mm
[6-3/4 (W) × 1-3/4 (H) × 1-1/4 (D) in.]
Weight
(main body) ..... 1.9 kg (4.2 lbs.)
(power box) ..... 0.2 kg

Audio/DSP

Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout maximum output level/
output impedance ..... 2.2 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
(volume: –30 dB)
Equalizer (13-Band Graphic Equalizer)
Frequency ..... 50/80/125/200/315/500/800 Hz
1.25/2/3.15/5/8/12.5 kHz
Equalization range ..... ±12 dB (2 dB)
Auto Equalizer (Front & Rear & Subwoofer 13-Band Graphic)
Frequency ..... 50/80/125/200/315/500/800 Hz
1.25/2/3.15/5/8/12.5 kHz
Equalization range ..... +6 — –12 dB (2 dB)
Network
HPF (Front/Rear)
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –12 dB/oct.
Subwoofer output
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –18 dB/oct.
Gain ..... –24 dB — +6 dB (1 dB)
Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format ..... Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics ..... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IHF-A network)
Dynamic range ..... 92 dB (1 kHz)
MP3 decoding ..... MPEG 1 Audio Layer 3
Number of channels ..... 2 (stereo)

HDD

HDD quantity ..... 10 GB
Codec ATRAC3
Frequency characteristics ..... 20 – 20,000 Hz (±1 dB)
Average seek time ..... 13 msec.

"Memory Stick" player

Type ..... MagicGate Memory Stick
Decording ATRAC3
Frequency characteristics ..... 20 – 20,000 Hz (±1 dB)

FM tuner

Frequency range ..... 87.9 – 107.9 MHz
Usable sensitivity ..... 9 dBf
(0.8 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 15 dBf (1.5 μV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IHF-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)
Selectivity ..... 70 dB (2ACA)
Three-signal intermodulation
(desired signal level) ..... 30 dBf
(two undesired signal level: 100 dBf)

AM tuner

Frequency range ..... 530 – 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Selectivity ..... 50 dB (±10 kHz)

Note:

- Specifications and design are subject to modification without notice for the sake of improvements.

● **DEH-P900HDD/EW**

Specifications

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Backup current ..... Less than 8 mA
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Dimensions
(mounting size) ..... 178 (W) × 50 (H) × 155 (D) mm
(front face) ..... 188 (W) × 58 (H) × 37 (D) mm
Weight
(main body) ..... 1.9 kg
(power box) ..... 0.2 kg

Audio/DSP

Maximum power output ..... 50 W × 4
Continuous power output ..... 27 W × 4
(DIN45324, +B = 14.4 V)
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout maximum output
level/output impedance ..... 2.2 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
(volume: –30 dB)
Equalizer (13-Band Graphic Equalizer)
Frequency ..... 50/80/125/200/315/500/800 Hz
1.25/2/3.15/5/8/12.5 kHz
Equalization range ..... ±12 dB (2 dB)
Auto Equalizer (Front & Rear & Subwoofer 13-Band Graphic)
Frequency ..... 50/80/125/200/315/500/800 Hz
1.25/2/3.15/5/8/12.5 kHz
Equalization range ..... +6 — –12 dB (2 dB)
Network
HPF (Front/Rear)
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –12 dB/oct.
Subwoofer
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –18 dB/oct.
Gain ..... –24 dB — +6 dB (1 dB)
Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format ..... Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics ..... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
MP3 decoding ..... MPEG 1 Audio Layer 3
Number of channels ..... 2 (stereo)

HDD

HDD quantity ..... 10 GB
Codec ATRAC3
Frequency characteristics ..... 20 – 20,000 Hz (±1 dB)
Average seek time ..... 13 msec.

"Memory Stick" player

Type ..... MagicGate Memory Stick
Codec ATRAC3
Frequency characteristics ..... 20 – 20,000 Hz (±1 dB)

FM tuner

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity ..... 9 dBf
(0.8 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 15 dBf
(1.5 μV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW tuner

Frequency range ..... 531 – 1,602 kHz (9 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

LW tuner

Frequency range ..... 153 – 281 kHz
Usable sensitivity ..... 30 μV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

Note:

- Specifications and design are subject to modification without notice for the sake of improvements.

● **DEH-P900HDD/ES**

Specifications

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Backup current ..... Less than 8 mA
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Dimensions
(DIN) (chassis) ..... 178 (W) × 50 (H) × 155 (D) mm
(nose) ..... 188 (W) × 58 (H) × 37 (D) mm
(D) (chassis) ..... 178 (W) × 50 (H) × 160 (D) mm
(nose) ..... 170 (W) × 46 (H) × 32 (D) mm
Weight
(main body) ..... 1.9 kg
(power box) ..... 0.2 kg

Audio/DSP

Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout maximum output level/
output impedance ..... 2.2 V/1 kΩ
Loudness contour ..... +10 dB (100 Hz), +6.5 dB (10 kHz) (volume: –30 dB)
Equalizer (13-Band Graphic Equalizer)
Frequency ..... 50/80/125/200/315/500/800 Hz 1.25/2/3.15/5/8/12.5 kHz
Equalization Range ..... ±12 dB (2 dB)
Auto Equalizer (Front & Rear & Subwoofer 13-Band Graphic)
Frequency ..... 50/80/125/200/315/500/800 Hz 1.25/2/3.15/5/8/12.5 kHz
Equalization Range ..... +6 — –12 dB (2 dB)
Network
HPF (Front/Rear)
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –12 dB/oct.
Subwoofer output
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –18 dB/oct.
Gain ..... –24 dB — +6 dB (1 dB)
Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format ..... Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics ..... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
MP3 decoding ..... MPEG 1 Audio Layer 3
Number of channels ..... 2 (stereo)

HDD

HDD quantity ..... 10 GB
Codec ATRAC3
Frequency characteristics ..... 20 – 20,000 Hz (±1 dB)
Average seek time ..... 13 msec.

"Memory Stick" player

Type ..... MagicGate Memory Stick
Codec ATRAC3
Frequency characteristics ..... 20 – 20,000 Hz (±1 dB)

FM tuner

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity ..... 9 dBf (0.8 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 15 dBf (1.5 μV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 531 – 1,602 kHz (9 kHz) 530 – 1,640 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz) 50 dB (±10 kHz)

Infrared remote control

Wavelength ..... 940 nm ±50 nm
Output ..... typ; 12 mw/sr per Infrared LED

Note:

- Specifications and design are subject to modification without notice for the sake of improvements.